



NOVEMBER 1992



SCHOLARSHIP ISSUE

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FCC Highlights ◦ ARRL Report ◦ VE Exam Schedule ◦ Public Service Report
DX Column ◦ Elmer's Corner ◦ Club Reports ◦ Want Ads ◦ Much More

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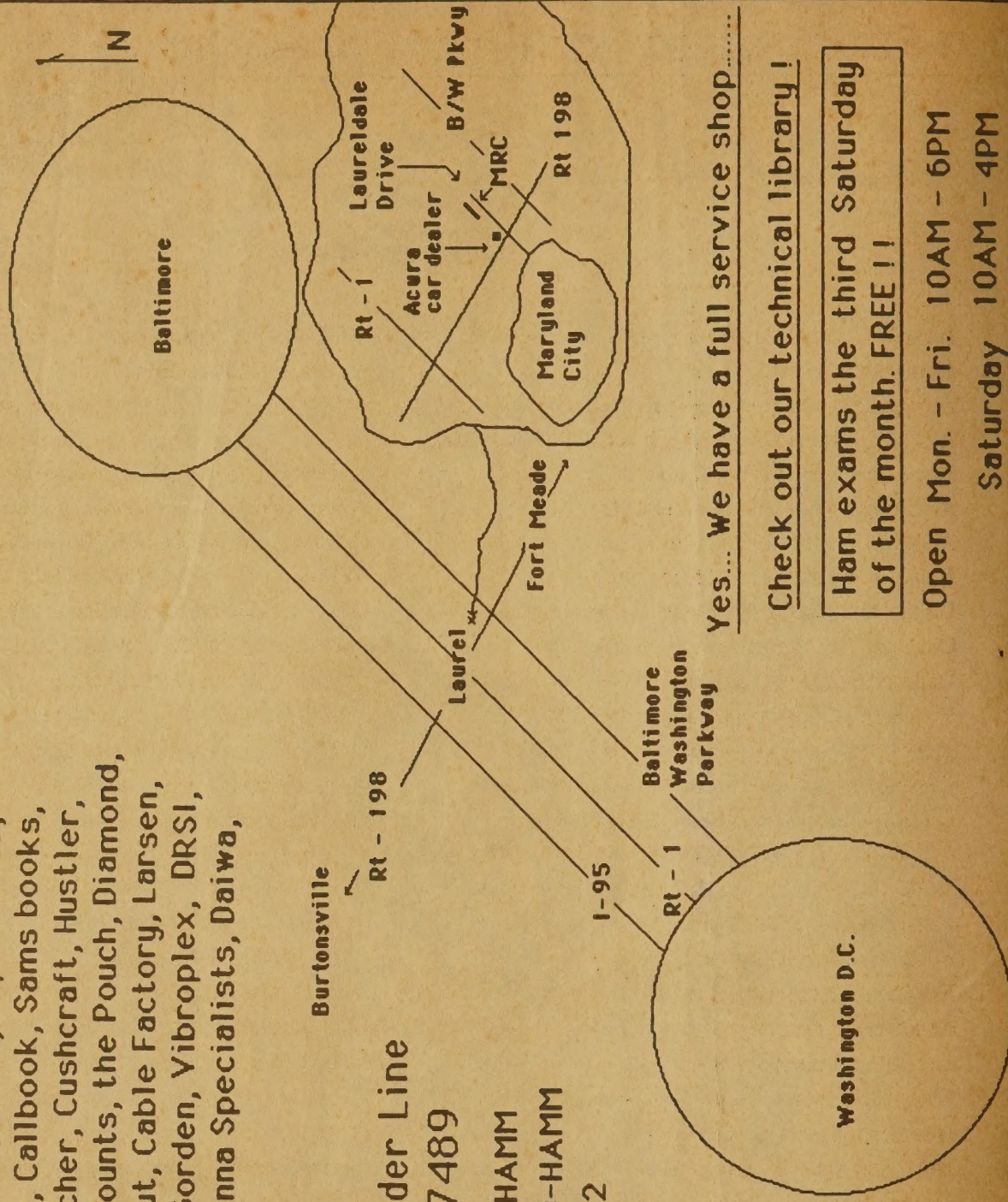
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| AMSAT - Radio Amateur Satellite Corporation | Mount Vernon Amateur Radio Club |
| Anne Arundel Radio Club | National Capital DX Association |
| Antietam Radio Association, Inc. | Naval Research Laboratory Radio Club |
| Arlington Amateur Radio Club | Northern Virginia FM Association |
| Baltimore Amateur Radio Club | Northern Virginia Radio Club |
| Baltimore Radio Amateur Television Society | Ole Virginia Hams Amateur Radio Club |
| Capital City Amateur Radio Society | Pentagon Amateur Radio Club |
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| Columbia Amateur Radio Association | Quarter Century Wireless Association, Inc. |
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AUTO-CALL

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Coming Events

Oct 24	WAYLARC Luncheon Falls Church, VA for all YLs	(Page 35)
Oct 25	Mason-Dixon Hamfest, Carroll County	(Page 33)
Oct 25	Daylight Savings Time ends	
Oct 31	Halloween	
Nov 11	Veteran's Day	
Dec 6	HolidayFest '92, Largo, Maryland	(Page 32)
Dec 20	First Day of Hanukkah	

1993

Jan 17	Richmond Frostfest	(Page 54)
Jan 20	B.A.R.C. Mini-Fest, Timonium, MD	(Page 22)
Feb 6	Columbia Area Amateur Club Hamfest, Lancaster, PA	
Feb 13	Valentine's Day	
Feb 27	Appalacian Amateur Radio Club Group Hamfest, Lebannon, PA	
Feb 28	Vienna Winterfest™, Vienna, VA	
Feb 28*	Cumberland County Winter Hamfest, Cam Hill, PA	
Mar ?	York Springfest, York, PA	
Mar 27-28	Greater Baltimore Hamboree, Timonium, MD	(Page 57)
Apr 3	Chesapeake ARS, Virginia Beach, VA	
Apr 4	Palm Sunday	
Apr 11	Easter Sunday	
Apr 11*	Penn-Del ARC Hamfest, New Castle, DE	
Apr 23-25	Dayton Hamvention	
May 1*	Kent Island Hamfest, Grasonville, MD	
May 8	FAR/QCWA Annual Spring Banquet, Greenbelt, MD	
May 9	Mother's Day	
May 9*	Roanoke Valley Hamfest, Vinton (Roanoke), VA	
May 14-16*	Rochester Hamfest, Rochester, NY	
May 15	Armed Forces Day	
May 16	Wheeling, W. VA Hamfest (West Virginia's Largest Hamfest)	
May 23*	Maryland FM Assn. Hamfest, Howard County Fairgrounds	
Jun 6*	Ole Virginia Hams Hamfest, Manassas, VA	
Jun 6	Breeze Shooters ARC Hamfest, Butler, PA	
Jun 20	Father's Day	
Jun 20*	Frederick Hamfest, Fredrick, MD	
Jun 26-27*	Field Day	
Jul 4	Independence Day	
Jul 11*	Carroll County Hamfest, Westminster, MD	
Jul 17-18	Southeastern Division Convention, Atlanta, Georgia	
Jul 25*	Brats Hamfest & Computer Fest, Timonium, MD	
Aug 1	Shennandoah Valley Hamfest, Berryville, VA	
Sep 12	F.A.R. Fest™ 93, Gaithersburg, MD	

*** Dates not yet confirmed**

Thanks to Bob Milligan - KI4MB for providing much of the above information.

Please keep Auto-Call advised of coming Hamfests and other important Coming Events.

We can use all the help we can get!

President's Corner

Tony Young - WA3YLO

President, Foundation For Amateur Radio

F.A.R. Fest™ Thanks Clubs

Of course you know that the 1992 F.A.R. Fest was a success. What you may not know is who made it happen.

Each year new names are added to the list of dedicated people who work harder and longer than any paid job would require. The work begins for next year with a de-briefing on this year's event. We review all that happened in planning and execution of the Fest. Each year we make changes to try to improve preparation so that our guests feel welcome, and enjoy themselves. More than 6,000 people passed through the gates this year, and most of them did it on Sunday morning. The Foundation is grateful to the vendors and to the attendees who made September 13 a special day.

Before any of that happened, some key people spent hundreds of hours during 1991 and 1992 preparing for this single day event. They deserve special mention because they are special people. Phil Russo-N3GDD and Mary Morris-N4TCI co-chaired the 1992 event. Nancy Draheim-KN4U handled table reservations and assignments (and more), and Mildred Mumford-N3KGQ handled finances (and more). Ed Mumford coordinated security (and more). The Friday, Saturday and Sunday of the event were non-stop workdays. Many, many thanks to each of them.

Trustees of the Foundation are not bound in any way to "serve" FAR except as representatives of their individual clubs. Yet, for

35 years people have stepped forward to help honor the charter that created YOUR Foundation. In fact, in its very first year, FAR made "arrangements for the 1957 Hamfest which in the past has been sponsored by individual clubs (Wash. Radio, Mobile, or Rock Creek)." That quote is from the August 1957 *Auto-Call*. The hamfest was held on October 6 that year at Gaithersburg. The eight charter clubs participated, including several which were front and center again, 25 years later, for the 1992 "happening."

It would be impossible to name all of the individuals from the several clubs that participated in the work prior to and during the September 13 event. There were over 130 people from the 12 groups listed below. I hope I don't miss any! Alphabetically, they are AARC, BARC, CCARS, CMARC, CARA, LARC, MARC, Mt. Vernon ARC, RCARA, VWS, WAARA and WAYLARC. While you look them up on our mast head page, take note of the growing number of member clubs. We may reach 70 this year.

A special note of thanks to Phil Russo, Sr., - W3ELS who, even in Florida retirement, still comes up to help on F.A.R. Fest weekends.

The Foundation depends on the hamfest to support administrative expenses and to fund savings accounts that produce scholarships each year. Look for more information about the 1992 F.A.R. Fest in later issues of *Auto-Call*. Again, **THANKS EVERYONE!**

Tony - WA3YLO

Note that the November meeting of the Foundation will be held in Alexandria, VA

Foundation Meetings

The Foundation for Amateur Radio, Inc. meets at 8:00 p.m. on the second Wednesday of each month.

Visitors are always welcome

The next meeting will be on November 11 in Alexandria, Virginia

School Building at 1108 Jefferson Street

Phone (301) 725-5822 for information

Talk-in on 147.18

FCC Highlights

by Jack Kelleher - W4ZC

RESTRUCTURING (Again)

The W5YI Report for October 1 reports that William C. Wells, WA8HSU, has submitted a lengthy Petition for Rule Making to the FCC suggesting that the number of amateur radio operator license classes should be reduced from five to three and that all Commission-mandated mode subbands be abolished. Wells asks that only the Novice, Technician and General Class licenses be retained, but that "Licensees currently holding the Advanced and Amateur Extra Class would be allowed to retain their license class, though with no additional privileges above General".

This is the latest in a long string of similar proposals. Wells' specific proposals are as follows:

Restructured Test Elements

- Element 1 Morse Code at 5 wpm
- Element 2 Rules and Regulations, Good Amateur Practice, Amateur Station Operating Procedure (35 questions)
- Element 3 Safety (25 questions)
- Element 4 Technical questions from current Element 2 and 3 (40 questions).

License Requirements

- Novice Elements 1, 2 and 3
- Technician Elements 2, 3 and 4
- General Elements 1, 2, 3 and 4

Operating Privileges

- Novice CW, FM, SSB 160 and 10 m (200W)
CW 80, 40, 15 m (200W)
CW, FM, SSB 6, 2, 1-1/4 m, 23 cm (25W)
- Technician All modes/emissions above 30 MHz (1,500W)
Technician Class amateurs who have passed a code examination would have their license renewed at the General Class
- General All amateur privileges at full power
General Class operators may be Volunteer Examiners. Novice examinations may be administered by 2 VEs who need not be accredited. Technician and General Class examinations must be administered under the VEC system by three accredited VEs.

All band plans mandated by Commission Rules on Amateur Service frequencies below 30 MHz should be eliminated - except narrow bandwidth modes will be required in the 30 meter band. All new Amateur Service licenses should be issued for the life of the holder.

Wells - an Extra Class amateur - argues that his "...petition remedies the injustice done to the General Class licensees who had earned privileges taken away as the result of the American Radio Relay League, Inc sponsored Incentive Licensing Program."

Wells goes on to offer other arguments for his proposal which are too lengthy for the "highlights" intent of this column. At this time the proposal has been received at the FCC, but no formal action thereon is under way. Some will view the proposals as simplification; others will say deregulation. Time will tell. In this connection we believe that the next item, while not an FCC highlight, is a "sign of the times"; and of interest to U.S. Amateur Radio operators in terms of activity in bands having worldwide coverage.

FCC Highlights - Continued

Amateur Regulation in Germany.

Another item in the October 1 W5YI Report concerns W5YI's understanding of new rules being proposed by Deutsche Bundespost (the German telecommunications regulating body) for radio amateurs in Germany.

The new proposed rules will apparently abolish all specific mode subbands and licenses for special operations. The only guidelines appear to be that amateurs may not interfere with other services.

Weak signal, satellite, ATV, repeater, packet and other specific mode groups are very concerned that interference free operations may become a thing of the past if the proposal becomes law. The special interest groups believe their modes require protection from interference. And many German amateurs want regulations to protect their right to experiment.

On the other hand many radio amateurs do not want the government to interfere in their hobby and see regulations as a reduction of their democratic rights.

The DARC (German Amateur Radio Society; member of the IARU) is suggesting some amendments to the Bundespost in order to prevent what they believe could be complete chaos. If DARC fails, the new regulations go into effect on January 1, 1993.

W5YI notes that Canada deregulated their service in 1990 to permit use of any mode on any band, including voice in historically CW spectrum and that the anticipated turmoil did not take place (Those of us who operate CW on 40 meters may not agree!)

Permissible Communications in the Amateur Service

In June of this year the FCC issued a Notice of Proposed Rule Making (Docket 92-136) on this subject, proposing changes to Part 97.113 of Rules for the Amateur Service, along the lines proposed by ARRL earlier this year. The deadline for comments was October 1, and for reply comments December 1.

We understand that surprisingly few comments were submitted in response to the NPRM, especially in view of the numerous proposals submitted, over the years, for just such a housecleaning. We intend to give you highlights of the comments and reply comments as soon as possible after December 1st.

Indecent Language

Just when some amateurs thought that the Commission was not interested in pursuing the obscenity and indecency provisions of Section 97.113(d) due to the difficulty of prosecuting such cases comes word that the FCC's Field Operations Bureau has just issued a \$2,000 Notice of Apparent Liability against General Class amateur Allen Burton, KA4URC of Hornbeak, Tennessee. It is believed to be the first monetary forfeiture ever issued for an over-the-air amateur service speech violation that was not linked to an additional easier to prove offense.

Burton was charged with using obscene and indecent language during an on-air argument on the 20 meter ham band (14.300 MHz) on June 29, 1992 between the hours of 3:53 and 4:22 p.m. -- a time when children might be likely to be listening. The NAL was issued by the FCC's Enforcement Division in Washington, D.C. Burton was monitored and his transmissions transcribed by FCC engineer Tom Shirley of the FCC's Kingsville, Texas monitoring station.
(from W5YI Report, October 1, 1992)

FCC Highlights - Continued

ED: Is obscene and/or indecent language necessary? We have been bombarded for years with arguments over the First Amendment "right" to use strong language (Incidentally the Supreme Court has said that obscene speech is not protected by the First Amendment). . It seems to us that the rights people sometimes go to extremes to test that right in terms of inundating us with the stuff. You older folks may remember what some of us were taught in our youth, that use of profanity is usually an indication of a limited vocabulary.

10 MHz for Novice and Technician plus??

W5YI reports that Bill Welsh, W6DDB of Lancaster CA has petitioned the FCC (on September 2) to make the 30-meter (10.1 - 10.15 MHz) amateur band available to Novice and Technician Plus licensees.

He argues that the 10 meter band is almost useless at this low point in the sunspot cycle, that the 15 meter band is very erratic, and that the 40-meter band is subject to interference from international shortwave broadcasting. The 40 meter Novice band is also not available to amateurs in other parts of the world (ED: The subband 7.1-7.15 MHz is allocated for the Amateur Service in ITU Region 2, but not in Regions 1 & 3).

Welsh says: "... about half of our American amateurs (Novice and Technician Plus) have very limited operating opportunities. They need the 30 meter band."

Welsh does not believe that voice privileges for Novices and the code-free Technician license benefits the Amateur Service since "... it reduces the possibility that they would acquire the increased code proficiency that is needed to upgrade ..."

A Continuing Success Story

It is no secret that the Technician Class is the fastest growing ham level. What is news is the rate at which the Technician Class is expanding. There are 25% more Techs than just a year ago, and the number has doubled in the last five years.

The Amateur Service grew by 48,431 licensees during the past year. 36,980 (or 76.4%) of them were Technicians. Here is what happened over the past decade:

August	Technicians	% increase during year
1982	75,703	
1983	77,298	2.1
1984	80,680	4.4
1985	82,867	2.5
1986	86,025	3.8
1987	90,675	5.4
1988	98,944	9.1
1989	111,708	12.9
1990	124,778	11.7
1991	148,229	18.8
1992*	185,209	24.8

It is interesting to note that the number of Technicians increased by an average of 3.8% a year between 1982 and 1987, 11.2% a year between 1988 and 1990, and jumped to an annual rate of 21.8% a year after the adoption of the Codeless Tech Class. It can be said that dropping the code from the Tech Class has had the impact of increasing the number of ham radio operators by nearly 10% a year. If the current growth rate continues, there will be half a million Technician Class amateurs within five years ... and possibly more than all other ham classes combined!

✕ ✕ ✕



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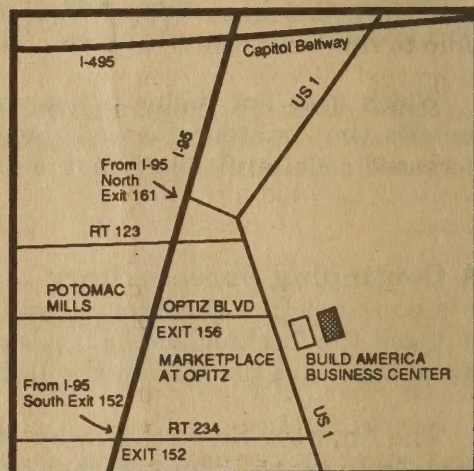
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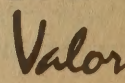
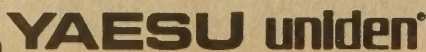
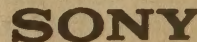
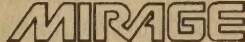
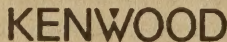
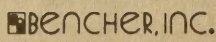
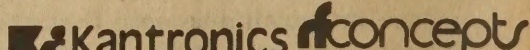
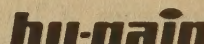
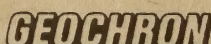
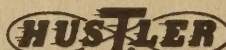
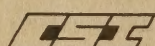
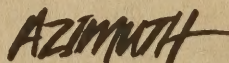
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American Radio Relay League Report

By John Swafford -- W4HU

This ARRL Report provides a brief summary of information published in the ARRL LETTER and other reports. The LETTER provides timely news of interest to active Radio Amateurs. Any League member may subscribe to the ARRL LETTER.

Amateur Killed in Hurricane Relief.
KD4OZY One of Hundreds Helping in S. Florida, Louisiana. Herbert Engelman - KD4OZY, of Lake Worth, Florida, died September 2, 1992, as a direct result of his activities in Hurricane Andrew relief.

Engelman, 55, was struck by lightning a week after the Hurricane struck, while helping unload an Army helicopter near a distribution center in Homestead. A witness told the Palm Beach Post that Engelman was "using a hand-held radio to relay information to a mobile ham-radio operator" when he ran out to meet the helicopter during a thunderstorm.

Manny Papandreaws - W4SS and ARRL Section Emergency Coordinator for South Florida, told the Post that Engelman was one of about a hundred Amateurs from as far away as New York who brought radio equipment to Dade County "to relieve radio operators there."

North Florida Amateurs Lead Communications Effort. North Florida Section Emergency Coordinator George Thurston - W4MLE, filed this report:

When a hurricane watch went up for southern Florida, the state Division of Emergency Management in Tallahassee opened their Emergency Operations Center and the state RACES (Radio Amateur Civil Emergency Service) net, with Bob Moody - W4WSZ as net control from his home station in Tallahassee and a two-meter link to the EOC. In the following six days, W4WSZ estimates he got a total of ten hours sleep -- as he handled the net with extraordinary skill. Other EOCs in Palm Beach and Miami opened and maintained contact with Tallahassee.

No one could do much more than get ready for the consequences as Andrew smashed ashore in south Dade County with peak gusts estimated at 200 mph and sustained winds perhaps as high as 185 mph at times -- speeds normally associated with tornadoes! (According to

W1YL/4, those who lived through the hurricane's eye were referring to it as "a 50-mile wide tornado"-- ed).

Although it was easy to find Amateurs eager to rush in, it was essential that they go in with definite instructions. Working with W4SS, I developed a memo outlining minimum needs. I didn't tell any Amateur he should go -- or shouldn't. But basically they needed certain credentials to get past police road blocks. And they needed to be completely self-contained with food, fuel, water, emergency power, radio gear, sleeping accommodations -- even toilet paper.

We asked that teams of at least four Amateurs travel in groups of several vehicles to speed the process and offer mutual support. I have no idea how many such teams eventually found their way to Dade County because I coordinated only a few of them, but on Wednesday, 2 September -- a week and a half after the first alert -- W4SS asked me to shut off the stream; South Florida ARES groups could handle the duties remaining after recovery efforts got better organized.

It is still too early, as I write, to fully evaluate the quality and effectiveness of the ARES/RACES response to the Andrew disaster. My first impressions are that our response from Northern Florida was as rapid and as effective as conditions in the devastated are permitted.

Preparations Pay Off for Louisiana

Amateurs. Hurricane Andrew did not stop in Florida, of course. Two days later he hit the coast of Louisiana, where millions of dollars in damage occurred. According to the Louisiana Red Cross, 187 shelters were open during and after the hurricane, 23,000 Louisiana citizens were displaced by the storm, and the Red Cross alone spent \$8 million.

One person of special note in Louisiana is Joe Boudreaux - KA5SDQ. He was assigned as shelter communicator for the Jeanerette Senior High School, where 1827 people were housed.

THE NEW GENERATION ROTATORS

THEY'RE NOT YOUR FATHER'S HAM "M"

Rotator Comparison Chart

	The New Generation									Old Generation	
Model/Specs	Create RC5	Create RC5A	Create RC5B	Emoto 105TSX	Emoto 747SRX	Emoto 1105MSX	Emoto 1200FX	Emoto 1300MSAX	Emoto 1800FSX	Telex HamIV	Telex T2X
Rotate Torque F/ft	43	116	160	37	50	57	143	215	287	67	83
GD ² Kgm	N/A	N/A	N/A	100	400	700	1000	1800	3000	N/A	N/A
Ant. Inertia Brk/Static Torque F/ft	506	1085	1450	215	502	717	1290	1792	2150	417	750
Wind Load In Tower (lb)	10	25	25	11	22	27	27	33	38	15	20
Mast mount	4	5	7	5	9	12	12	15	16	7.5	10
Rotating speed 360°	60-150 sec variable	60-150 sec variable	60-150 sec variable	55	35	65	40	77	80	60	60
Rev Delay	None	2 sec	3 sec							None	None
Preset	Opt 3	Opt 3	yes	no	no	Opt	yes	yes	yes	no	no
Computer	no	no	no	no	yes	yes	yes	yes	yes	no	no
Power 120V 60Hz	80VA	140VA	200VA	70VA	70VA	70VA	90VA	120VA	150VA	26V AC	26V AC
Mast Dia.	2-2.5 in	2-2.5 in	2-2.5 in	2-2.4 in	1.6-2.4 in	1.6-2.4 in	1.6-2.4 in	2.4-3.1 in	3.5-5.5 in	2 in	2 in
Control wire	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	7 cond	8 cond	8 cond
Vertical max. load #	880	1540	1540	660	1100	880	1760	1760	2200	400	800
Rotor w/ff	13	17	20	7.5	9	11	11	13	39.5	24	28
Brake type	worm drive	worm drive	worm drive	disk	friction	friction	friction	friction	friction	wedge	wedge
Self center mast clamp	yes	yes	yes	Adj	Adj	Adj	Adj	Adj	Adj	no	no
Special notes	3-6	3-6	3-6	6	1-6	6	2-6	6	6	4-7	4-7
Prong (5)	\$269.00	449.95	799.00	209.95	399.00	589.00	679.00	1099.00	3272.00	369.95	439.95
With Preset	\$379.00	\$528.95				\$663.00					

Notes:

1. Turns Tribander 470° in 35 seconds
 4. T2X and HamIV have same motor and gear train parts
 7. 120V normal 220V special order

2. Variable speed 40 sec max
 5. EEB prices as of 5/91 subject to change
 8. Wind Load in Sq. Feet

3. Variable speed w/SCR constant rotational torque at any speed
 6. 120/220V tapped transformer

THE NEW GENERATION

An entire generation of amateurs have grown up knowing only one rotator manufacturer. Those old favorites are still popular. But, now a new generation of rotators are out to set high standards with innovative features such as: large machined steel gears, cast and machined aluminum cases, solid state controllers for smooth start/stop, preset, computer control and circular position indicators.

The bottom line is... strong, long term reliability, ease of operation and cost effectiveness. When you erect an antenna system the last thing you need is rotor problems!

CREATIVE DESIGN ROTATORS

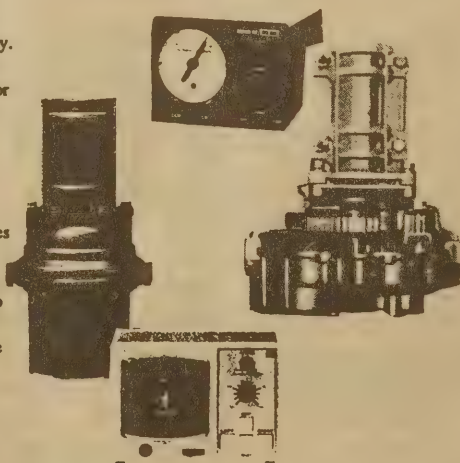
CREATE is serious about long term reliability. The CREATE RC5 series rotators were designed with the serious DX'er in mind. Three models for medium, large and ultra large antenna arrays are available.

ROTOR FEATURES OF RC5 SERIES

* Large strong reduction gear system provides long term reliability during years of rugged operation. * Worm drive gearing provides powerful braking force and low backlash to keep your antenna in position during severe weather conditions. * Cast and machined aluminum case provide the strength required for long lasting service. * Mast clamp guides for ease of mast installation.

CONTROLLER FEATURES OF RC5 SERIES

* Speed control using silicon control rectifiers allows slow speed without reduction in rotation torque. Rotating spec is constant 60 to 200 seconds per 360 degrees. * Reverse delay control (RDC). Delays reverse command to rotor until antenna is at rest. Prevents damage to rotor antenna and tower system. * Circular dial indicator, for quick accurate reading of antenna direction. Great circle overlay available for USA (west-cent-east). * Preset (on 3 models) a must for quick setting of antenna direction. Just turn the knob to the new heading, the rest is automatic. Won't waste your time holding down the brake lever and wait.



EMOTO ROTATORS

More than 60% of all Japan amateurs use EMOTO rotators. Many unique innovations and international patents have made EMOTO number one.

EMOTO has a fool proof method to calculate which of their rotators will satisfy your needs. This GD² formula considers your antenna (s) weight, boom and longest element length. The EMOTO sheet is in metric so one must convert weight 2.2lbs= 1kg and length in meters 3.3ft.=1 meter. Calculate your GD² then compare EMOTO GD² spec above.

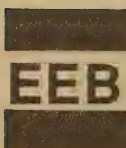
$$GD^2 = W \times \frac{L^2 + B^2}{12}$$

Where: W: weight of antenna (kg)
 L: length of longest element (m)
 B: length of boom(m)

GD² EXAMPLES: Kgm²

TH7DX (437), TH3JR (63), 205BA (675), DISC-3 (1300), A3S (61), A4S (173), KLM KT34XA (378), 3 ELE TRIBAND (150), 6 ELE TRIBAND (400), 20M 5 ELE (750), 15M 6 ELE (650), 40M 2 ELE SHORT BOOM (240), 40M 2 ELE FULL BOOM (800), 80M 2 ELE (1500), STACK ARRAYS 10M 5 ELE (60), 15M 5 ELE (200), 20M 5 ELE (750), 60+200+750=1010

EMOTO also has a robust AZ-EL rotator that has computer I/O ports. For those working satellites or EME moon bounce the EV700D5X should do the job, as rotating torque is more than double the YAESU G5400B AZ-EL.



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ARRL Report - Continued

At the height of the storm one person in the shelter suffered a heart attack. Boudreaux notified the EOC of the situation and a rescue team was dispatched to the school to evacuate the patient. At this point the winds were at hurricane force. The rescue team, consisting of two fire trucks, an ambulance, and a fire rescue unit, became isolated and had to ride out the storm for 5 hours. They used the fire trucks as a shield for the ambulance and the rescue unit.

Communications were maintained on the Emergency Management, Fire, and Ambulance frequencies at the EOC and the Iberia Parish Medical Center, where a cardiologist was in constant communications with the medic in the ambulance. While this was in progress another person suffered a heart attack at the same shelter, the roof was coming apart, and the wall on one wing was damaged and taking on water. The nurse at the shelter was able to keep the patient stable using her medication. Before the winds would allow that patient to be evacuated to a hospital a third person suffered a heart attack.

The shelter manager said that KA5SDQ was more than a communicator during the ordeal. Without his communications this shelter would have been totally isolated and no one would have been able to make an early rescue and evacuation, he said. The EOC never lost contact with KA5SDQ during the entire period of the storm.

Digital Band Plan Hammered Out. 40 Meters Only Stumbling Block at IARU Conference. Voluntary HF band-planning for packet radio and other digital modes was the main topic considered recently by Amateurs from 34 Western Hemisphere nations (10 of them by proxy). Meeting in Curacao, Netherlands Antilles from August 31 to September 4, the General Assembly of Region 2 of the international Amateur Radio Union achieved their goal of agreeing to recommend new digital band segments on the Amateur HF bands that would more closely reflect actual patterns of activity, as well as bring them in line with other parts of the world, i.e., IARU Regions 1 and 3.

The current Region 2 band plans adopted at the last Region 2 conference three years ago were the basis for ARRL's 1989 petition seeking

segments for automatic control of HF digital modes (RM-7248). The plans for 40 and 20 meters had proved to be unacceptable in the U.S.

In particular, the 20 Meter band plan has been brought into line by recognizing packet up to 14.112 MHz -- a significant achievement by the ARRL delegation, and a great improvement over the post-Orlando situation, according to ARRL President George S. Wilson III, W4OYI.

Because 40-meter operating patterns in the United States are somewhat different than those in the rest of the Region, this band posed the most difficult problem. While the U.S. and its possessions in Region 2 are allowed SSB operation only from 7.150 MHz and up, the rest of Region 2 uses the band from 7.050 and up (and sometimes even lower) for SSB. No agreement could be reached that reflected both existing packet activity and the strong desires of other countries for 7.050-7.100 MHz to be kept free of packet and other digital modes in favor of SSB.

The band segment favored by the rest of Region (other than the U.S.) for packet, 7.40-7.50 MHz, was not acceptable to the U.S. delegation because of continuing high levels of CW activity. The U.S. delegation made it clear to the conference that a packet segment in the 7.040-7.50 slot could not be implemented in the U.S. for that reason.

And while Region 2 non-U.S. delegations supported a packet segment at 7.100-7.120 MHz, this would interfere with U.S. Novice operators. However, with a general decline in HF broadcast activity in the band and expanded Novice privileges elsewhere, the problem may not be insurmountable, Wilson said.

The planning concept used by Region 2 is for a segment to be designated for "Digital Modes" (RTTY, AMTOR, packet, PACTOR, CLOVER, etc.) with a sub-segment designated "packet priority." Packet, being an automatic mode, doesn't require much protection from itself, and would not have to protect other modes from interference in Packet Priority sub-segments (except for the 40 meter problem noted earlier).

The Region 2 packet concept also assumes that forwarding should be limited to the sub-segments specifically designated for packet, but not on an exclusive basis.

ARRL Report - Continued

In recognition of what is expected to be a rapid adoption of new techniques such as PACTOR and CLOVER, the Assembly did not attempt a more detailed description of sub-segments.

Recommended HF band segments for CW and for radiotelephone (including SSTV and FAX) were unchanged; CW is still acceptable in all segments.

Here are the HF digital segments as agreed in Curacao:

- 80 meters: 3580-3635 kHz, with packet priority at 3620-3635.
- 40 meters: 7035-7050 kHz, with packet priority at 7040-7050 kHz for international communication; 7100-7120 kHz packet priority for communication within Region 2.
- 30 meters: 10.130-10.150 MHz, with packet priority at 10.140-10.150 MHz.
- 20 meters: 14.070-14.112 MHz (with 1-Khz guard band at 14.100 MHz for the beacon network); packet priority at 14.095-14.0995 MHz; packet shared with SSB at 14.1005-14.112 MHz.
- 17 meters: 18.100-18.110 MHz, with packet priority at 18.105-18.110 MHz.
- 15 meters: 21.070-21.125 MHz, with packet priority at 21.090-21.125 MHz.
- 12 meters: 24.920-24.930 MHz, with packet priority at 24.925-24.930 MHz.
- 10 meters: 28.070-28.189 MHz, with packet priority at 28.120-28.189 MHz.

Amateurs Connect With Latest Shuttle.

The recently landed Space Shuttle Mission made more than 5,000 Amateur Radio voice and packet connects, according to early calculations by the National Aeronautics and Space Administration, Shuttle STS-47, with a 7-person crew including astronaut hams Dr. Jay Apt - N5QWL and Dr. Mamoru Mohri - 7L2NJY, landed September 20.

The SAREX (Shuttle Amateur Radio EXperiment) equipment was put on the air just hours after launch on September 12 and worked to perfection, according to SAREX organizers. More than 600 Amateurs connected to the Shuttle's robot packet station, W5RRR-1, in the first 24 hours of the mission. (W5RRR is the "home call sign" of the NASA Johnson Space Center Amateur Radio Club in Houston). The JSC ARC is responsible for the Amateur Radio

equipment aboard the shuttle and many other aspects of SAREX operations.

Because of its purely scientific assignment, this shuttle flight provided an especially good opportunity for classrooms to speak to the astronauts. Excellent horizon-to-horizon contacts were made with student groups in the U.S. and Australia. For example, at the Del-Mar Middle School in Santa Cruz, California, students asked an equal number of questions while more than 150 classmates looked on.

In keeping with the educational objective of SAREX, Astronaut Jay Apt personalized many of the beacon messages transmitted by the shuttle's packet robot. One of them described how the Amateur Radio station aboard the shuttle Endeavour was used to augment the shuttle's primary communications system:

"1400 UTC 18 September. We had a nice demonstration today of Amateur Radio's utility: The White Sands, New Mexico, ground station for the data relay satellites NASA uses for our shuttle air-ground comm went off the air unexpectedly for about 15 minutes. As it happened, this was just prior to a planned school contact via Andy - VK4KIV. Andy relayed to Houston's mission control center for us, and bridged the gap in communications via ham radio! We were able to learn exactly what the problem was, and told MCC what our plans were, averting any possible confusion. Thanks, Andy!

"I got on 'phone over New Zealand and South Africa today; perhaps I can work a few more in tomorrow -- also got in one 'phone QSO over Hawaii. Many countries in the packet log -- it's great to see your interest! -- '73 de Jay Apt N5QWL, Flight Engineer aboard Endeavour."

456 Amateur stations were logged as "worked" on packet. There were 717 different call signs logged on the "heard" list (including those "worked"). Figures for voice contacts are not yet available.

QSL or SWL cards should be sent (with an SASE) to Jay Apt-N5QWL, 806 Shorewood Drive, Seabrook, TX 77586, USA.

Three SAREX shuttle missions are scheduled next year: Feb 18, 1993 (STS-55); Mar 11, 1993 (STS-56); and Apr 28, 1993 (STS-57).

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Public Service Report

Hank Black - N3ESR

(301) 340-8595

Material for the PUBLIC SERVICE REPORT can be left to N3ESR on the WA3ZNW packet bulletin board on 145.090 MHz, called by telephone, or mailed electronically by modem on arrangements, or mailed to Public Service Report, 105 North Van Buren St., Rockville, MD 20850-1860.

Deadline for receipt of material is the third of the month.

THE CHALLENGE OF LAST MINUTE CHANGES

Preparations had been under way for well over a month for hams to assist the local MS chapter with communications for a one day 100 mile bike tour of Fairfax county. Assignments had been made, rest stops located, information packets distributed, and hand-held batteries charged. Everything was ready for the early morning meeting on the event day Sunday, September 13. Then the phone rang Friday afternoon, and everything changed.

Fairfax County police department had made the decision not to approve the road use permit. So in the space of 36 hours what had taken MS three months to put together had to be filed in the circular file, and we all started basically over. The event was moved entirely within the confines of Prince William county. A new route had to be developed. Hams had to be contacted on short notice and reassigned. Maps and information packets had to be redone. Sag vehicles were notified of the route change.

The hams responded with characteristic enthusiasm. In spite of the fact that the event was being held on Gaithersburg hamfest weekend, and the last minute problems and changes, the turn out was 110%. Operators who had not previously volunteered came to the event to lend a hand. This was indeed a group effort, as hams from Maryland, City of Alexandria, Arlington, Fairfax, and Prince William counties participated.

The event was an unqualified success. All of the rest stops were manned, ambulances were covered, and the sags were out in force. The event showed that even with a short notice change in plans, amateur radio can be mobilized quickly to provide effective communications, whether for a bike tour or an actual emergency. Thanks and well done to all the hams who gave up Gaithersburg to help with the event: K4FHK, N3IWM, W4PVA, KA4PEI, KC4YMS, KK4GB, N4ECI, N1FFN, N4KEQ, KC4OCG, WB3HAD, KC4AUJ, KC4RON, N4URL, KB2BNX, N4SCK, KB2CEV, KD4GYV, N4ZGI, KC4WES, N4HCP, KC4ZPM, W4AWM, KD4CSO, KC4EFJ, and the Old Virginia Hams for the use of the WA4FPM repeater.

Submitted by Ed Ober - KC4EFJ

COUNTY WARNING AREA INCREASING

As of December 1, 1992, as part of the National Weather Service's modernization program, the local storm (thunderstorm, flash flood and tornado) Warning area covered by the NWS' Washington Forecast Office will increase to cover a number of additional cities and counties. The new areas are as follows:

In Maryland, Baltimore City, Harford, Baltimore, Anne Arundel, Howard, Carroll and Allegany Counties; in Virginia, Spotsylvania including the City of Fredericksburg, Albermarle including the City of Charlottesville, Nelson and Highland counties; in West Virginia, Mineral, Hampshire, Hardy, Grant and Pendleton counties.

The increase in the existing Warning area will no doubt provide communications and alerting challenges to the entire SKYWARN Network. As always, the primary repeater for the SKYWARN Net is the 147.300+ WA4TSC Bluemont Repeater. The alternate is the 146.910- W4XG NVFMA Tysons Corner repeater.

(Continued)

Public Service Report - Continued

The repeater operators and amateurs are thanked for volunteering use of their repeaters during severe weather operations. Comments will be appreciated with the understanding that all suggestions may not be immediately integrated into the system.

DECEMBER NET CONTROL OPERATOR TRAINING

We are in the beginning stages of planning net control training classes to held at the NWS during December and/or January. Anyone interested in being trained as a net control operator is invited to call Dan Gropper, KC4OCG (703-281-2358), or Barbara McNaught (703-260-0209). Additionally, with all the changes made that have been made during the past year to both the SKYWARN amateur radio station and to the Warning area, I highly recommend that anyone who has already been trained as a net control operator be re-certified to handle the additional responsibilities.

SKYWARN T-SHIRTS

SKYWARN T-shirts are available from Barbara McNaught of the National Weather Service Washington Forecast Office. These will be cash sales only for \$10 per shirt. Unfortunately Barbara does not have the capability to accept checks nor to mail the shirts out. Please contact Barbara and arrange a time to drop by the Forecast Office and see the SKYWARN Amateur Radio Station when you pick up your T-shirt.

SKYWARN TRAINING SCHEDULE

PREREGISTRATION REQUIRED - Call 703-260-0209 to register.

- | | |
|----------|---|
| Oct. 29 | SKYWARN Training Class Charles Town/Bar Dain, WVA 7-10 PM Public Health and State Police Preregister with Sterling NWS |
| Nov. 7 | SKYWARN Basic Training (especially geared toward educators) 9 a.m. to Noon, Sterling, VA. |
| | SKYWARN Winter Storm Class 1:30 p.m. to 4 p.m. NWS Sterling, VA. |
| Nov. 17 | SKYWARN Winter Storm Class, 7:30 p.m. to 9 p.m. NWS Sterling, VA. |
| November | For other locations, Winchester, VA, Cumberland and Westminster, MD
To be announced. (Check with NWS number above.) |
| Dec. 8 | SKYWARN Basic Spotter Training, 7 p.m. to 10 p.m. Hagerstown Jr. College, Hagerstown, MD. |
| Dec. 9 | SKYWARN Basic Training, 6 p.m. to 9 p.m., Southern MD Community Center Rt. 4, Lusby, MD. Call Bob Paine - KA3ZCI at 301-855-9276 or 410-535-2810. |

-Submitted by Dan Gropper, KC4OCG, SKYWARN Net Manager.

PUBLIC SERVICE CALENDAR

- | | |
|----------|---|
| Oct. 25 | Marine Corps Marathon
Dave Buell, AA6RM (703) 866-4958
or Bob Lewis, N4SCK (703) 830-7325 |
| November | National Capital ARES Council Meeting
Date, time and location to be announced.
Check-in on the 9 p.m. Sunday NCAC net on
146.91 MHz for details. |

DX DX DX

John Kanode, N4MM

How Good Will It Be? How Long Will It Last?

It was almost like someone had decided to turn the bands on again. In mid September the higher bands, 10, 12 and 15 came alive with all kinds of DX. I, along with many others, hope that we will get another good season of long DX openings on 10, 12 and 15 meters. Now is the time to be sure you have worked Croatia, Slovenia, Bosnia-Herzegovina and Macedonia on 10, 12 and 15 meters. They will be new DXCC Countries soon and contacts made now will be good for DXCC credits. I am not sure when

Czechoslovakia is due to officially split up into the two new countries, but this situation should be watched and when it happens, be sure to work these two new ones also. For those who are working on 10 meter DXCC, now is the time to get those countries that you need on that band. This may be the last good chance you will have to do so. Next year may be the sound of silence. 17 meters also should be watched for good DX. It will be interesting to see what the declining solar cycle will do to this band.

UPCOMING DXPEDITIONS

FW	Wallis Island	October 28- November 4
T32BE	E. Kiribati	November 24- December 7
JU830C	Mongolia	Now until December 31

UPCOMING DX CONTESTS

Worked All Europe RTTY Contest	November 14-15
OK-DX Contest	November 14-15
CQ WW CW DX Contest	November 28-29

TIDBITS

The VKØ Heard Island DXpedition has been cancelled due to lack of support. The Willis Island operation will take place as scheduled.

The Slovenian hams will start to use S5 callsigns on October 21.

The DX forum(s) held at the Roanoke Division Convention in Virginia Beach went very well. The forum was held both Saturday and Sunday. Chuck Hutchinson - K8CH gave a fine presentation on DXCC operations at ARRL HQ. There was a question and answer session in which the audience was the main participant. There was a table in the ARRL booth where QSLs were being checked for all DXCC awards, VUCC and WAS. A video on the recent South Sandwich DXpedition was shown. At the end of each forum, there was a prize drawing.

In the October issue of *The DX Magazine*, there is an article about the DXpedition to Myanmar (XYØRR). I found a statement which I found very interesting. The author said "The *WARC* bands gave us much pleasure, they had fewer breakers and malicious jammers. Clearly these bands are the domain of the true DXers."

DXCC BACKLOG

As all of you know, there is about a 5 month backlog of DXCC applications at ARRL HQ. This is not a good situation and steps are now being taken to get rid of this problem once and for all. The ARRL Board of Directors now has a very detailed proposal which addresses this situation and what it will take to correct the problem. In the October issue of *The DX Magazine*, Chod Harris has written an editorial in regards to the DXCC backlog. This article is well worth reading.

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Training Classes

Robert Armstrong, WA4SQL

44 South French Street, Alexandria, VA 22304

Phone (703) 751-2294

General Information

Alexandria Radio Club	John Forrest - WZ4A	(703) 971-2905
Anne Arundel Radio Club	Tony Young - WA3YLO	(301) 262-1917
Arlington Amateur Radio Club	Fred Bardsley - WD4DHW	(703) 533-0372
Baltimore Radio Amateur TV Society	Joe Chidester - W3SHZ	(410) 602-0353
Fauquier Amateur Radio Club	Bill Mills - KC5PF	(703) 937-4090
Frederick Amateur Radio Club	Steve Bauman - W3FOA	(301) 662-4552
Herndon Repeater Group	Michael Weber - WB8RDN	(703) 450-2304
Laurel Amateur Radio Club	Pud Reaver - W3DQI	(301) 498-6293
MADRAS	Larry Ziecheck - N3GKZ	(301) 984-6112
Maryland Mobileers	John Baugus	(301) 551-3161
Montgomery Amateur Radio Club	Ken Nichols - KD3VK	(301) 977-5405
Mount Vernon Amateur Radio Club	John Forrest - WZ4A	(703) 971-3905
NASA/Goddard Amateur Radio Club	Vikki Gigante - KA3PVS	(301) 249-2609
Ole Virginia Hams ARC	John Fritsch - N4YOB	(703) 791-5995
Pentagon Amateur Radio Club	David Boyd - K9MX	(703) 756-1817
Rock Creek Amateur Radio Assn.	Walt Ramsey - AK3B	(301) 949-3954
St. Mary's County ARA		(301) 862-2214
Shenandoah Valley ARC	Guy Black - W4PSJ	(703) 722-4952
Southern Maryland ARC	Vic Curtis - WA3YUV	(301) 888-1388
Southern Patuxent ARC	Dwayne Kincaid - WD8OYG	(301) 586-2177
Springfield Estates ARC	Will Schmitt - KD4CNX	(703) 768-5709
Stafford Adult Education	Jerry Mullinix - AC4HK	(703) 659-3905
Sterling Park Amateur Radio Club	Mark Johnson - WS3N	(703) 430-3804
Tri-County Amateur Radio Club	Al Sines - WA3QGA	Box 710, College Park, MD 20740
Vienna Wireless Society	Paul Wilkins - AB4CY	(703) 560-2779
Woodbridge Wireless, Inc.	Loyd Davis - K83I	(703) 360-0248

Novice classes, Springfield, VA. Sponsored by Springfield Estates Elementary School ARC. Starting October 23. Contact Will Schmitt - KD4CNX (703) 768-5709.

Novice Training Classes, Towson, MD. Sponsored by BRATS. Classes are being held on an On-going basis every Tuesday evening at the Towson Armory. Classes are free; Materials (which you can keep) consist of a book and tape and cost \$19.90. For registration or information, contact Joe Chidester - W3SHZ (410) 602-0353

Novice Training Classes, N.W. Washington, DC. Sponsored by MADRAS. For more information contact Larry Zeichek - N3GKZ (301) 984-6112.

VIRGINIA TRAFFIC TRAINING NET - 3685 kHz 6:30 p.m. daily. 5 - 8 wpm.

SLOW CODE PRACTICE NET, 28.250 MHz 7:00 to 8:00 p.m. Wednesdays. Sponsored by Woodbridge Wireless, Inc.

Please keep Auto-Call advised of Training Classes

FOUNDATION FOR AMATEUR RADIO
Volunteer Examiner Cooperative

Nancy Draheim - NK4U
3513 Old Post Road, Fairfax, VA 22030
(703) 691-0078

SCHEDULE OF EXAMINATIONS

NOTICE: If you presently have a Technician class license which was acquired prior to March 21 1987, keep a copy of this license available when you decide to upgrade to General class. It will be your responsibility to prove you are grandfathered for Element 3B (General Theory).

- Oct 28 Maryland Mobileers ARC (Glen Burnie, MD) (Laurel VEC) Pre-registration
Contact: Jerry Gavin, NU3D (410) 761-1423
- Nov 1 D.C.M. ARC (Landover MD) (ARRL VEC) Walk-in
Contact Freddie Battle, NG3G (202) 546-9348 (Days) (301) 773-2898 (Evenings)
- Nov 7 Portsmouth ARC (Portsmouth, VA) (ARRL VEC)
Contact: Art Thiemens, AA4AT (804) 484-2857
- Nov 14 Anne Arundel Radio Club (Davidsonville, MD) (Laurel VEC) Walk-in
Contact: Nancy Alley, NT3Z (410) 761-7115 or Bob Israel, WC3I 262-5083
- Mount Vernon ARC (Alexandria, VA) (Laurel VEC) Walk-in
Contact: Frank Mackey, N4GUS (703) 455-1510
- Ole Virginia Hams ARC (Manassas, VA) (ARRL VEC) Walk-in
Contact: Harry Vorhauer, W4PVA (703) 368-6050
- Stafford Area Repeater Assn. (Stafford, VA) (W5YI VEC) Walk-in
Contact: David Boyd, K9MX (703) 659-6241 or Jim McCloud - N4LZJ (703) 786-8012
- Nov 20 Southern Maryland ARC (Temple Hills, MD) (Laurel VEC)
Contact: Ray Simpson, WI3A (301) 894-0606 (After 4 p.m.)
- Nov 21 Laurel ARC (Laurel, MD) (Laurel VEC) Pre-registration desirable
Contact: John Creel, WB3GXW (301) 572-5124 after 6 p.m.
- Herndon Repeater Group (Herndon, VA) (ARRL VEC) Pre-registration required
Contact: Mike Weber, WB8RDN (703) 450-2304
- Hampton Roads Radio Assn. (Hampton, VA) (W5YI VEC)
Contact: Bill Runyon, N4BDH (804) 487-8611
- Nov 30 Maryland Mobileers ARC (Annapolis, MD) (Laurel VEC) Pre-registration
Contact: John Kohl, KO4A (410) 757-8148
- Dec 5 Virginia Beach ARC (Virginia Beach, VA) (ARRL VEC)
Contact: Ed Robison, WD4GOY (804) 468-0866
- Middletown VE Team (Middletown, VA) (ARRL VEC) Limited walk-ins
Contact: Walt Quitter, NC4B (703) 869-5241
- Montgomery College (Germantown, MD) (ARRL VEC) Preregistration desired
Contact: Walt Lafferty, KX3U (301) 942-2923
- Dec 6 D.C.M. ARC (Landover MD) (ARRL VEC) Walk-in
Contact Freddie Battle, NG3G (202) 546-9348 (Days) (301) 773-2898 (Evenings)

Volunteer Examiner Cooperative - Continued

- Dec 7 Southern Maryland ARC (Temple Hills, MD) (Laurel VEC)
Contact: Ray Simpson, WI3A (301) 894-0606 (After 4 p.m.)
- Dec 11 Piedmont Technical Center (Culpeper, VA) (ARRL VEC) Pre-registration requested
Contact: Bill Brown - AC4KP (703) 547-3089
- Dec 12 Anne Arundel Radio Club (Davidsonville, MD) (Laurel VEC) Walk-in
Contact: Nancy Alley, NT3Z (410) 761-7115 or Bob Israel, WC3I 262-5083
- Massanutten ARA (Harrisonburg, VA) (ARRL VEC) Walk-in
Contact: Marshall Cooper, N4ZKH (703) 856-8012 (6-9 p.m.)
- Richmond, VA (W5YI VEC) Pre-registration required
Contact: Dow Pierce (804) 232-8128
- Dec 14 PROS (Salisbury, MD) (Laurel VEC) Walk-in
Contact: Dave Bridge (301) 436-8360
- Dec 17 BARC (Towson, MD) (ARRL VEC) Walk-in
Contact: Robert Kennick (410) 426-8255
- 1993
- Jan 3 D.C.M. ARC (Landover MD) (ARRL VEC) Walk-in
Contact Freddie Battle, NG3G (202) 546-9348 (Days) (301) 773-2898 (Evenings)
- Jan 9 Anne Arundel Radio Club (Davidsonville, MD) (Laurel VEC) Walk-in
Contact: Nancy Alley, NT3Z (410) 761-7115 or Bob Israel, WC3I (301) 262-5083
- George Washington U/Dept. of State (Washington, D.C.) (ARRL VEC) Limited Walk-in
Contact: Derrill Rohlf, W3WOX (301) 423-0179
- Jan 29 Stafford Area Repeater Assn. (Stafford, VA) (W5YI VEC) Walk-in
Contact: David Boyd, K9MX (703) 659-6241 or Jim McCloud - N4LZJ (703) 786-8012
- Feb 7 D.C.M. ARC (Landover MD) (ARRL VEC) Walk-in
Contact Freddie Battle, NG3G (202) 546-9348 (Days) (301) 773-2898 (Evenings)
- Mar 7 D.C.M. ARC (Landover MD) (ARRL VEC) Walk-in
Contact Freddie Battle, NG3G (202) 546-9348 (Days) (301) 773-2898 (Evenings)
- Mar 26 Stafford Area Repeater Assn. (Stafford, VA) (W5YI VEC) Walk-in
Contact: David Boyd, K9MX (703) 659-6241 or Jim McCloud - N4LZJ (703) 786-8012

If you presently have a Technician class license which was acquired prior to March 21 1987, keep a copy of this license available when you decide to upgrade to General class. It will be your responsibility to prove you are grandfathered for Element 3B (General Theory).

NOTE: All examinations require that you submit:
Copy of your current Amateur Radio license (bring original)
Completed FCC Form 610.
Check for appropriate examination fee.
Fees of individual VEC may vary.
ARRL Exam fee is \$5.40
W5YI Exam fee is \$5.40
Laurel VEC all exams are free.

This schedule of examinations appears each month in Auto-Call Magazine
Sponsored by the Foundation for Amateur Radio

Elmer's Corner

By Scott Schaefer - WR4S

This column will be devoted to guiding new Amateurs through some of the common questions and problems encountered by all of us in our hamming endeavors. I plan to give a brief synopsis on what's out there and what are the best buys for a new Amateur. I will also try to help out on problems pertaining to setting up a station. Send us your questions and we will try to provide the answers. Any input that might be helpful to newcomers will also be most welcome.

Write or phone me at 107 Melody Lane S.E., Vienna, VA 22180 (703) 255-7264

We ended last month discussing the different methods of mounting a VHF or UHF antenna on your vehicle. This month we will examine the antenna choices that you will be faced with.

Before we get into that subject, tho, let me give a word of thanks to Art-W1CRO for comments he made in an interesting article published in The Ole Virginia Hams Newsletter). Art was kind enough to mention *Auto-Call* (and Elmer) from a positive viewpoint.

Ok, let's look at the myriad of antenna choices available on the market. The least expensive, and most inconspicuous antenna is the quarter-wave vertical. When this type of antenna is used with a permanent mount, it will do an excellent job in most urban applications, and your total outlay will be around \$20. You may also use a quarter-wave with a magnetic mount (mag mount), but your effective range will be degraded. One advantage of using a quarter-wave antenna is its size (approximately 19" on 2-meters). This can be important if clearance in parking garages or at home is a concern.

The most common antenna choice (on 2-meters) is the 5/8 wave base loaded style. This style of antenna will give approximately 3 dB gain over a similarly mounted quarter-wave antenna over a fairly omni-directional pattern. Hold it, Elmer. What is this "3 dB gain" and "omni-directional" baloney?

Sorry for forgetting that this is an "Elmer's" column!

When the subject of "gain" of an antenna is discussed, the first thing that must be addressed is the question of "gain over what?" For example, if you have ever touched the antenna terminals on your TV set (without an antenna connected) and noticed that you could now see some kind of TV signal coming though, your body is actually exhibiting "gain." Of course, what you are referencing this "gain" to is **no** antenna at all!. In the HF radio world

(0-30 MHz) the standard of comparison is "gain over a half wave antenna" (referred to as a "dipole" in hamspeak.) But in the VHF/UHF spectrum, most gain figures are based using a quarter-wave ground plane antenna. This something to remember when reading the specifications listed in the various advertisement for the variety of antennas available on the market.

First you must decide on the reference antenna on which your gain comparisons will be based. In the antenna theory books, the term "isotropic source antenna" is used to describe an imaginary RF radiator that antenna gain is measured against, but it seems more logical in the ham world to look at our antenna gain measurements using a real antenna as our reference point. The next time you read one of the antenna ads, try to notice what type of reference antenna the manufacturer is using. You will see the term "dBi" and "dBd," and in a few cases only "dB" used to show gain figures. I think you will be amazed at how the manufacturers use these three terms to advertise now great their product performs!

By the way, "dBi" is used when your reference is the aforementioned "isotropic" antenna. "dBd" refers to the use of a "half-wave" or "dipole" antenna, and when you see only "dB" you can only assume the manufacturer is either trying to sell some "snake oil" or (even worse) doesn't know the difference. The problem lies in the fact there is an automatic increase in your gain figure if you simply change from using "dBd" to "dBi," due to the fact that a "dipole" antenna itself exhibits almost 2 dB gain over an "isotropic" source! If only the term "dB" is used, they could be using an old sock for the reference Antenna for all you know.

Remember the term "omni-directional." I'll try to explain next month why sometimes the antenna with the most gain is not always the best choice.

✻ ✻ ✻

ANNOUNCING THE 1993 B.A.R.C. "IT'S FREE" MINI-FEST

WEDNESDAY, JANUARY 20
MARYLAND STATE FAIRGROUNDS EXHIBITION HALL
TIMONIUM, MARYLAND

FOR THE ENJOYMENT OF THE AMATEUR COMMUNITY

SPONSORED BY:

THE BALTIMORE AMATEUR RADIO CLUB, INC.

DOORS OPEN AT 5 PM, RUNS 'TIL 10 PM

ADMISSION IS FREE! • TABLES ARE FREE!

DON'T WAIT 'TIL SPRING
COME TO THE B.A.R.C. "IT'S FREE" MINI-FEST
OUR ANNUAL MID-WINTER INDOOR
AMATEUR RADIO AND ELECTRONIC
FLEA MARKET AT THE FAIRGROUNDS
THE BEST BARGAIN OF THE YEAR!

EVERYONE IS WELCOME
NO RESERVATIONS ARE NEEDED
BRING YOUR STUFF, JUST SET UP A TABLE,
PUT IT AWAY WHEN YOU'RE DONE
CLEAN UP YOUR TRASH
THAT'S ALL THERE IS TO IT!



BARC APPROVED

TALK IN:
146.87-
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449.625-
PL 107.2



FOR MORE INFORMATION: DON'T WRITE,
JUST DIAL (410) HAM-FEST
FOR UP-TO-DATE INFORMATION
ABOUT THE 1993 B.A.R.C. MINI-FEST

Foundation For Amateur Radio Scholarship Program

The Foundation For Amateur Radio is pleased to introduce the winners of the forty-three scholarships which have been awarded this year. There were winners from twenty different states. Eleven are from the local area.

Four of the scholarships were funded directly by the Foundation For Amateur Radio and nine more were funded by Foundation member clubs. Other scholarships are funded by various organizations or individuals and are administered by the Foundation without cost.

For more information on the FAR Scholarship Program, see page 31.

George P. Grumbrell - KA3RLZ - Gilbertsville, PA

Rose Ellen Bills Memorial Scholarship - \$2,000

George is currently a sophomore at Lehigh University where he is majoring in Electrical Engineering. He has been interested in electricity since the age of 10 and was 13 when he obtained his Novice license - then upgraded to General. He was chosen as the winner of several science and engineering fair awards and recognized for numerous other academic achievements. At Lehigh he is a member of the University Choir. His current Amateur Radio activity is confined to 10-meter sideband and 2-meter FM.



Vilate Zitting - WJ7M - Salt Lake City, UT

Young Ladies' Radio League Scholarship - \$1,200

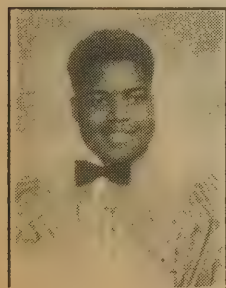
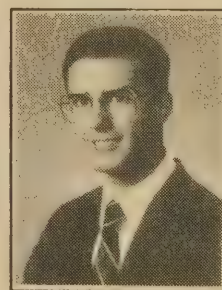
Vilate has completed two years at Salt Lake Community College with a GPA of 3.9. She hopes to obtain a B.S. in Nursing. Meanwhile, she is a Certified Nurse Aid and Emergency Medical Technician. There are eleven other licensed Amateurs in her family - her mother, father, five sisters, and four brother. She holds an Extra Class license and enjoys both Sweepstakes and Field Day operations. Her award was presented at the Rocky Mountain Division convention by ARRL Director Marshall Quiat - AGØX and witnessed by former YLRL President Mary Lou Brown - NM7N.

James Harper - KB5CTQ - Amarillo, TX

Radio Club of America Scholarships - \$1,000

In Memory of Jack Poppele

James will be a sophomore at Rice University, pursuing a course in Electrical Engineering. After graduation he plans to go on to medical school and then utilize both degrees in cancer research. During his high school years, his record indicates numerous memberships and extra-curricular participation with several leadership positions. He is active on all of the HF bands except 160-meters, and is on 2-meters using both voice and digital modes.



Rodney T. Frank - KA3OZF - Upper Marlboro, MD

Baltimore Amateur Radio Club Scholarships - \$1,000

Rodney plans to study Electrical Engineering at the University of Michigan in Ann Arbor, Michigan. His high school record is very impressive with several activities and awards. He was the Commander of both his Air Force ROTC unit and its drill team. As a volunteer, he has participated in numerous community and academic efforts. A Novice since he was 11, he plans to upgrade and take part in the activities at the college radio club.

Scholarship Winners



Joseph P. Nunemaker - N3KHP

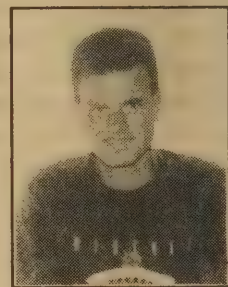
Baltimore Amateur Radio Club Scholarships - \$1,000

Joseph is in his junior year at Florida Atlantic University in Boca Raton, majoring in Marine Biology. These past summer he qualified for the General Class license and used Amateur Radio to keep in touch with his parents who are both licensed. Other activities include the rowing team at college and being a counselor at Camp Opportunity - a camp for under-privileged and abused children.

Colin Pitts - N3KHC - Annapolis, MD

Baltimore Amateur Radio Club Scholarships - \$1,000

Colin will be a junior at the NY State University Maritime College. Although his major interest is in Naval Architecture, he must also acquire his U.S. Coast Guard 3rd Mates license as a requisite for graduation. This also requires a knowledge of Mores code, which should increase his chances to upgrade to General Class. Prior to spending his summers at sea, he was a sailing instructor at the Annapolis Sailing School. Another of his interests is radio controlled models. While at school he is active on 2- and 1¼-meters from his dorm room



Brian D. Kuebert - N4UEZ - Warrenton, VA

Victor C. Clark Memorial Scholarship - \$1,000

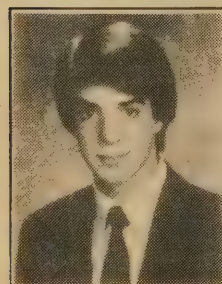
Sponsored by the Vienna Wireless Society

Brian will be attending the University of Virginia and majoring in Electrical Engineering. He is an Eagle Scout and has been on his school's tennis and golf teams. He was actually introduced to Amateur Radio through the Scout merit badge program, even though his dad signs as K3KA. In the Scouting program, he served as the Chief of Lodge #470 (the biggest order of the Allow Lodge in the U.S.

Stephen Groves - KC4CDX - Reston, VA

Vienna Wireless Society Scholarship - \$1,000

Stephen is a second year student at Virginia Polytechnic Institute, studying Electrical Engineering. He has been licensed since he was a freshman in high school and has been an active member of the Vienna Wireless Society. His father - N4UUJ is also licensed and shares the Amateur Radio experience with his son. Prior to going to college Stephen was involved with his club's Field Day activities and volunteered for the 150K MS Bikeathon in Northern Virginia.



Michael T. Decerbo - N1FYO - Trumbull, CT

John W. Gore Memorial Scholarship - \$1,000

Funded by the Foundation for Amateur Radio

Michael is continuing his studies in Electrical Engineering and Computer Science at the Massachusetts Institute of Technology after a very successful academic year. He is a member of the MIT Radio Society and uses Amateur Radio to maintain his fluency in both Spanish and Russian. He believes that the changes in Russia could point the way for a challenging engineering career. Michael was one of last year's winners of the Radio Club of America scholarship.

Scholarship Winners

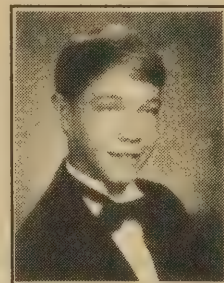


Andrew L. Glasbrenner - KO4MA - Brooksville, FL
Dade Radio Club Tropical Hamboree Scholarships - \$1,000

Andrew graduated in the upper tenth of his high school class and as a Radio Amateur has enjoyed both DXing and operating in public service events. His involvement in numerous high school activities, including sports, has resulted in his being well recommended by those who know him. He has chosen to study Electrical Engineering at the University of Northern Florida.

Michael D. Sever - KD4CZT - Leesburg, FL
Dade Radio Club Tropical Hamboree Scholarships - \$1,000

Michael plans to study Computer Science at the University of Central Florida in Orlando. He graduated 4th in his high school class of 300. He holds a Technician Plus license and has a strong interest in packet. He is an Eagle Scout and has received various math and computer awards.

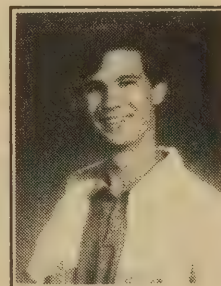


Scott W. Petty - KA3QLF - Dalton, PA
Edwin S. Van Deusen Memorial Scholarship - \$1,000
Sponsored by the Foundation for Amateur Radio

Scott is continuing his studies toward an Associate Degree in Electronics and Fluidics Technology at the Johnson Technical Institute. Both his father and mother are licensed and he and his father have multi-oped in several contests. The area where he lives has been plagued with severe weather and has provided him an opportunity to participate on several occasions in the Skywarn system. Scott won this same scholarship last year.

Christopher A. Chadwick - KA3TII - Kensington, MD
Columbia Amateur Radio Association Scholarships - \$1,000

Christopher will be a sophomore at Johns Hopkins University, studying Behavioral Biology in preparation for medical school and graduate study. He is an Eagle Scout, a member of the college band, and spent this past summer as a volunteer Lab Assistant at the Uniformed Services University of Health and Science. Most of his HF activity is confined to summer vacation periods when he seeks to complete his DXCC. Christopher was awarded this same scholarship last year.



John Smedley - N3JRH - Boonsboro, MD
Frederick (MD) Amateur Radio Club Scholarship - \$1,000

John will be in his junior year at the Johns Hopkins University in Baltimore where he is majoring in Mathematics and Physics. He has maintained a 3.8 GPA and was named to the Dean's List each semester. He is a member of the Baltimore Radio Amateur Television Society and the Antietam Radio Association. He participates in SKYWARN and regularly provides communications for Explorer Scout Post 17 during their outings.

Scholarship Winners



**Michelle L. Czaikowski - N4QHT - Stephens City, VA
Nanticoke Amateur Radio Club Scholarship - \$1,000**

Michelle is the first winner of this new award. She holds a General Class license and plans to major in Environmental Science at the Virginia Polytechnic Institute. All of her family are licensed and a certificate is issued to those Amateurs lucky enough to contact all four of the Czaikowskis. She was a member of the Shenandoah Valley Amateur Radio Club before going to college. In addition, she enjoys several hobbies and participates in various community activities.

Jennifer Doerrie - KA5MWJ - Booker, TX

Kevin Barry Perdue Memorial Scholarship - \$1,000

Sponsored by Kay Craigie - WT3P and Carter Craigie - KD3AO

After two years at Angelo State University, Jennifer transferred to Southwest Texas State University in San Marcos, working toward a BA degree in Political Science with a minor in Spanish. Her step-mother, father, and sister are all licensed. She has been active in public service events, and as a volunteer in various community efforts. At the same time her academic grades have been excellent. She was a two time winner of the ARNS Scholarship.



**Melissa L. Benish - N3FAC - Pittston, PA
QCWA Memorial Scholarships - \$800**

Melissa will be a junior at Penn State where she continues her studies in Mechanical Engineering. During the past summer she upgraded from General to Advanced Class. Her dream continues to be part of NASA's astronaut program. She comes from an all-ham family with four other licensed Amateurs. Besides Amateur Radio, she is an active volunteer both at college and in her home community. Melissa was winner of the Rose Ellen Bills Memorial scholarship last year.

**Elena Doerrie - KB5DAK - Booker, TX
QCWA Memorial Scholarships - \$800**

Elena holds a Technician "plus" license. During her high school career, she was active in numerous extra curricular activities. This year she will be a freshman at Johnson Whales University in Providence, RI, studying Public Relations and Advertising. Other honors include being selected as an FHA/Hero for three years. She has also been recognized as an Outstanding Youth Leader in Texas by the Texas State Fair Board.



**Lesly Goh - KD4IPS - Somerville, MA
QCWA Memorial Scholarships - \$800**

Lesly is a first generation immigrant from Singapore and has completed two years at Cambridge University where she studied Law. Currently, she is in her final year working toward a BS Degree in Computer Engineering at the University of Florida. In 1991 she was an Honorable Mention winner for the "Florida College Student of the Year." Her outstanding academic record and participation in various leadership organizations make her a very deserving scholarship candidate.

Scholarship Winners



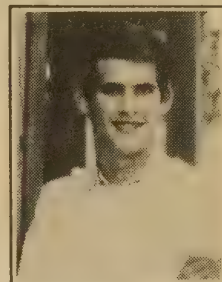
Martin H. Gruen-KA2VLD - Margate, FL
QCWA Memorial Scholarships - \$800

Martin was licensed at the age of 12 and has since upgraded to Advanced Class. His mother, father, and sister (also a previous scholarship winner) all have Advanced Class licenses. Currently Martin is a junior at Stetson University, majoring in Biology. Eventually he plans to be a chiropractic doctor. He was the 1990 winner of the Van Deusen Memorial Scholarship. Before moving to Florida from New Jersey, he was a member of RACES in Camden County and the Assistant Radio Officer in the town of Barrington.

Dustin W. Howell-N5ZVY - Minden, LA

QCWA Memorial Scholarships - \$800

Dustin is involved in studying for two degrees - first a B.S. in Aviation Science and an Associate Degree in Criminal Justice. He is active on all of the HF bands 10 thru 80 on both voice and CW, using the digital modes on 20-meters. Besides having several jobs to finance his education, he serves as the secretary of his local Amateur Radio club. He served in the Civil Air Patrol as the Communications Officer of the Cadet program, and in 1988 he joined the Louisiana National Guard.



Shelly L. Jones-KE5DX - Harrison, AR

QCWA Memorial Scholarships - \$800

Shelly was first licensed as a Novice when she was 9 years old and has held an Extra Class since 1988. Her mother, father, and sister are all licensed and compete for operating time. As she enters her senior year, majoring in Mathematics at Southwest Missouri State University, her Grade Point Average is 4.0 for each of her first three years. She has served as the Secretary/Treasurer of the Northern Arkansas Amateur Radio Society and has always been available to participate in various presentations and projects.

Diane R. Magen-KG5CS - Grand Forks, ND

QCWA Memorial Scholarships - \$800

Diane was first licensed in 1987 and received her Extra Class license when she was 15. She holds both private and commercial pilot's licenses and is currently working on her multi-engine rating. As a junior at the University of North Dakota, majoring in Aeronautical Studies, she hopes to become a corporate pilot. She made the Dean's List all four semesters and was named to the National Dean's List. As a baton twirler, she has earned over 75 trophies in local, state and national competitions. Other hobbies include bowling, music, photography, swimming and traveling.



Andrew M. Ross-KC6OHS - San Diego, CA

QCWA Memorial Scholarships - \$800

Andrew will be a freshman studying Applied Mathematics at Harvey Mudd College in Claremont, California. Both his mother and father are licensed. He holds a Technician Class license, operating mostly on 2-meter FM and packet. This year he was one of the Amateur Radio volunteers at the Miramar Naval Air Station Airshow. He was valedictorian of his high school class and participated in numerous extra-curricular activities.

Scholarship Winners



Rebecca Schoenberg - N2ILW - S. Toms River, NJ
QCWA Memorial Scholarships - \$800

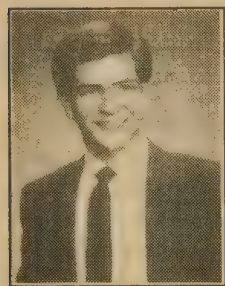
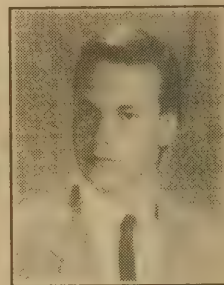
Rebecca graduated fifth in her high school class of 296. She plans to major in Biology at Tufts University and eventually become a veterinarian. Her mother, father, and grandfather are all licensed. As a teenager she was on the Library Teen Advisory Board. She seeks to encourage Amateur Radio operation for others by example and offering assistance.

Steven J. Pratt - KB2JHX - Endwell, NY

William E. Cooke Memorial Scholarship - \$800

Sponsored by the Anne Arundel Amateur Radio Club

Steven graduated sixth in his high school class of 180. He will be a freshman at the University of Rochester, studying Electrical Engineering. He holds a General Class license and was the Bausch & Lomb Outstanding Science Student medalist. Other interests include being a Volunteer Fireman and bowling. He enjoys working with the digital modes and likes to chase DX.



Timothy J. Czerwonka - WO9U - Chetek, WI

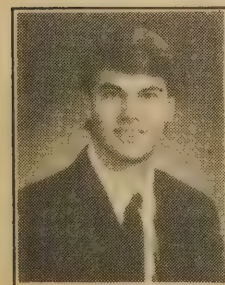
West Allis Radio Amateur Club Memorial Scholarships - \$750

Timothy plans to study Mechanical Engineering at the University of Wisconsin. Besides being an active Amateur with an Extra Class license, he enjoys building and flying radio-controlled model aircraft. He graduated first in his high school class of 72 and has received numerous school, scholarship, and civic awards. His Amateur Radio activities include being a member of the Wisconsin Association of Packet Radio and a Volunteer Examiner

Robert J. Goemans - N9HAD - Madison, WI

West Allis Radio Amateur Club Memorial Scholarships - \$750

Robert has had a very successful freshman year at the University of Wisconsin. He has not decided whether his major field of study will be Physics or Mathematics. He comes from an all-ham family and enjoys operation on several of the bands. He has worked full-time this past summer to help with his college expenses and used some of his spare time to prepare to audition for the University Symphony Orchestra. This is the second year that he has been awarded one of the WARAC Memorial Scholarships.



Douglas Kleeman - KA9LWN - Wauwatosa, WI

West Allis Radio Amateur Club Memorial Scholarships - \$750

Since receiving his undergraduate degree at Marquette, Steven has continued on to medical school where he will be a second year student at the Medical College of Wisconsin. Upon graduation he believes he will be in a unique position of combining the useful roles of a Radio Amateur and a doctor in the event of a disaster situation. Time permitting, he is active on all bands 80- thru 2-meter. Douglas was a winner of this award two year ago.

Scholarship Winners



Rebecca B. Knoll - N4JST - Staunton, VA
10-10 International Net Scholarships - \$750

Rebecca is now studying to be an attorney at Washington and Lee University. She is active on the Amateur bands. There are five hams in her immediate family. Not very many hams can claim that both their grandmother and grandfather are also licensed. In college she spent four years with the Symphonic Orchestra and played in Carnegie Hall. In 1987 she toured in Greece and in 1991 she visited Spain. Twice prior to graduation from Southern College, Rebecca was a FAR scholarship winner.

Daniel C. Lawry - KA1PNE - Claremont, NH
10-10 International Net Scholarships - \$750

Daniel spent part of this past year co-oping with General Electric as a Power Engineer. He enjoys both operating and home-brew construction. At Clarkson, he served as the secretary of the University Radio Club and participated in the club's Volunteer Examiner program. The club has an ongoing VE team that tests about 15 applicants every other month.



Danielle F. KuKanich - KC4SUV - Winchester, VA
Amateur Radio News Service Scholarships - \$600

Danielle was introduced into Amateur Radio by a friend and obtained her Novice license in August 1990. She has since upgraded to General. When time permits, she is an active DXer and checks into the Virginia traffic net. She has introduced several people to Amateur Radio and believes in increasing its value to the community. Currently she is an Accounting major at James Madison University. Her other hobbies include sewing, ballet dancing, and caring for her pets.



Kristin M. Poduska - WO0H - Mount Vernon, IA
Amateur Radio News Service Scholarships - \$600

Kristin was a straight A student in high school and graduated first in her class of 57. She will be a freshman Physics major at Carleton College in Northfield, Minnesota. She has held an Extra Class license for four years and succeeded in introducing the hobby to her brother. Her father has also expressed an interest in getting his ticket. She is in the process of becoming a Volunteer Examiner and hopes to maintain her other interests, which include acoustic guitar, several sports and cartooning.



Craig A. Gullickson - KC6CEX - Fresno, CA
Edmund B. Redington Memorial Scholarship - \$500

During his high school career, Craig has developed an outstanding record of honors, awards, and extra-curricular activities. He is a Life Member of the California Scholarship Federation because he qualified for the Dean's List each semester in high school. During his freshman year at the California Polytechnic State University, he plans to pursue a course of studies leading to a B.S. in Electrical Engineering with a minor in Communications. He is active on all of the bands from 3.5- thru 440-MHz.



Scholarship Winners



Jason Conolly - N7IME - Albany, OR
Radio Club of America Scholarships - \$500
In Memory of J. Alan Biggs - K4AA

Jason was the valedictorian of his high school class and has received several academic awards. In addition, he has earned letters for both soccer and track. He will be a sophomore in Electrical Engineering at Oregon State University. His Amateur Radio activities include operation on all of the HF bands plus 2-meter voice and packet.

Jon M. Knodel - KB7NXW - Aberdeen, WA
Radio Club of America Scholarships - \$500
From the Leo Meyerson Scholarship Fund

Jon will be going to Gonzaga University in Spokane, Washington where he will be pursuing a major in Electrical Engineering. Part of his Amateur Radio activity has been the operation of Special Event stations. As a volunteer, he has performed many hours of service for this community and his church. He participated in his high school's Honors Program and graduated in the upper 10% of his class.



John Kedziora - WU3C - Jamison, PA
Murgas Amateur Radio Club Scholarship - \$500

John is the first winner of this new scholarship and plans to be in the Electrical Engineering program at the Worcester Polytechnic Institute. He has had an excellent academic record and his SAT scores were outstanding. He is an active member of a state-of-the-art radio club. His Amateur Radio activities include everything from CW to slow-scan television and weak signal to packet. He believes his being able to go to college became possible largely thru the skills he attained as a Radio Amateur.

Elisa A. Niemtzow - KA6WYY - Gaithersburg, MD
Southern Patuxent Amateur Radio Club Scholarship - \$500

Elisa has continued her studies in French at the University of Pennsylvania. She was born in France and during this past summer worked as a Magazine Assistant at the French Embassy in Washington. Her father, also licensed, is an Air Force doctor. Last year she participated in the University Radio Club and, with her Extra Class license, is looking forward to becoming a Volunteer Examiner. She is also active in the French Penn House and French Club. Last year she was awarded one of the Baltimore Amateur Radio Club scholarships.



Hong Ly Meng - KA3UGN - Philadelphia, PA
Delaware Valley Amateur Radio Association Scholarship - \$500

Hong has completed his second year at Rensselaer Polytechnic Institute, making the Dean's List each semester. He is a Physics major with a minor in German. His hope is to earn a PhD and then teach or conduct research. He believes that America's future depends on educating its youth, and feels that the achievement of his goals would be an honor to his parents and an asset to his adopted country. Hong was winner of the DVRA scholarship in 1991.

Scholarship Winners

Steven D. Kraft - KE9RW - Menomonie, WI

South Milwaukee Amateur Radio Club Scholarships - \$500

Steven had a successful first year at Gustavus Adolphus College. This year he will be majoring in Computer Science and hopes to continue on into Graduate School. He holds an Advanced Class license and is active mostly on 10- and 20-meters. He has a long list of honors and community activities. His mother is also licensed - as KF9CU. He was a winner of a South Milwaukee Amateur Radio Club scholarship last year.



David Pettit - WO9M - Elwood, IN

South Milwaukee ARC Scholarships - \$500

David will be attending Rose-Hulman Institute of Technology at Terre Haute, Indiana, where he plans to major in Electrical Engineering. New at the college this year will be the inclusion of a new integrated course in Science, Engineering and Mathematics. Besides looking forward to being active in the college radio club, he plans to participate in track and cross-country running. Besides operating, he enjoys constructing QRP and "fox hunting" equipment.



John Powilaites - N9KEX - Racine, WI

South Milwaukee ARC Scholarships - \$500

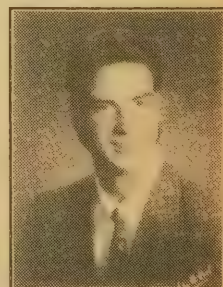
John will be attending the University of Wisconsin at Parkside in Kenosha, Wisconsin, pursuing a B.S. degree in Applied Computer Science. He hopes to become either a computer programmer or a system's analyst. Most of his operating activity concerns Public Service events and running a bulletin Board. In addition he continues to be a shortwave listener and enjoys the Scouting Jamboree-on-the-Air activities.



Eric J. Tlachac - KB9FPM - Wisconsin Rapids, WI

South Milwaukee ARC Scholarships - \$500

Eric graduated 10th in his high school class of 467. His mother, father, and younger sister are all licensed as is his grandfather. He will be attending the College of Engineering at the University of Wisconsin, studying Environmental Engineering. His ultimate goal is to attend law school and become a lawyer specializing in environmental issues. He enjoys electronic construction and installation work besides operating both single sideband and CW on 10-meters.



Foundation scholarships are open to all Radio Amateurs meeting the qualifications and residence requirements of the various sponsors. Announcements of the 1993 awards will appear in the March or April issues of the major Amateur Radio publications and radio club newsletters.

For further information contact:

FAR Scholarships
6903 Rhode Island Avenue
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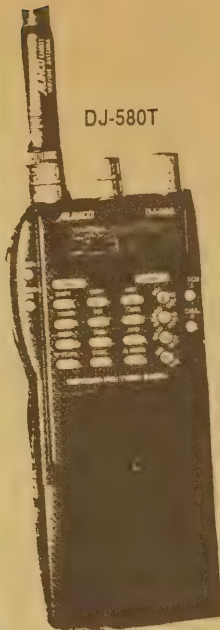
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ALINCO DJ-162T - Our best economy handheld for 2M. 20 memories, subtone enc., DSQ, odd splits, Batt. Save, APO, Backlit LCD readout. Receives AM acft., priority, call channel. 5.6x2.14x1.25in. BIG 700 mah battery back, 5W on DC. Call Williams for your DJ-162T today. We'll charge your battery and include mod. instructions.



DJ-162T

DR-119T



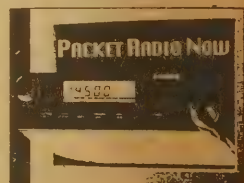
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WAYLARC

Washington Area Young Ladies Radio Club

Meetings: Saturday October 17, Anchor Inn, Wheaton, MD. 11:30 luncheon
Saturday October 24, S&W Cafeteria, Falls Church, VA 11:30
Contact: Irene Akers - W3RXJ (301) 423-7138, Temple Hills, MD
Vikki Gigante - KA3PVS (301) 249-2609, Bowie, MD
Ethel Smith - K4LMB (703) 536-8469, McLean, VA

A number of YLs have been expressing interest in a local YL organization. Especially now with the success of the Technician entry level license, the number of YLs have increased dramatically and it would be nice to get together at least a couple of times a year and discuss our accomplishments and our frustrations and our visions for the future. We could do a great deal to provide assistance and encouragement to each other and to other women who have been hesitant about trying to enter this marvelous service. We think it is time to reactivate the WAYLARCs (Washington Area Young Ladies Radio Club.)

The WAYLARCs became an institution in the Washington Area nearly 40 years ago. It was one of the first clubs with a regular column in the Auto-Call magazine and one of the organizing member clubs in the formation of the Foundation for Amateur Radio (back in 1957). The club has conducted the Ladies Programs at the Gaithersburg Hamfests for 35 years - primarily through the efforts of Irene Akers - W3RXJ. But in spite of all this, the club itself has become very inactive in recent years. We are now doing something about that!

Two separate re-organization luncheon meetings were scheduled in October so everyone would have an opportunity to attend one or both. The first one was held on October 17 at the Anchor Inn in Wheaton, MD; the second meeting will be held on Saturday, October 24 at the S & W Cafeteria, 115 Hillwood Avenue, Falls Church, VA. (About 2 miles west of Seven Corners.) Private meeting space will be available. Take your choice from the cafeteria menu and bring your tray to the meeting room. If you just want a cup of coffee or a dish of ice cream, that is okay, too. Visitors are also welcome (we'll even let a few OMs sit in!) For further information and luncheon reservations, call any of the contacts listed above.

If you are a licensed YL or an aspiring YL, please plan to come to the meeting. If you need - or can provide - a car pool, we will try to help. Reservations for the S&W Cafeteria should must be made before October 22nd. We have promised them a good turn-out and must know how many people to set up for.

We are looking forward to seeing you.

W3RXJ, KA3PVS, K4LMB

YL MEETING

For all local area YLs

Saturday, October 24 - S&W Cafeteria, Falls Church, VA

Make your Reservations Early

Laurel Amateur Radio Club

A Volunteer Examiner Coordinator

Meetings:	4th Wednesday of each month (except November & December) 8:00 p.m. at Harrison-Beard Building on corner of 9th and Montgomery, Laurel, Maryland.
Social:	2nd Wednesday of each month except December. (Call for directions.)
Nets:	1st & 3rd & 5th Wednesday of each month, 8:30 p.m. on 147.54 simplex.
Mail:	P.O. Box 3039, Laurel, MD 20709-0039
Exams:	3rd Saturday of each month, 10:00 a.m. at Maryland Radio Center.
Information:	Jim - W13N (301) 725-6829 or Pud - W3DQI at (301) 498-6293

The Laurel Amateur Radio Club is active in the Laurel area, which we think generally includes most of Northern PG County, as well as the surrounding area in Howard, Montgomery, and Anne Arundel Counties. All Amateurs in "our neighborhood" are welcome to participate in LARC activities.

The Laurel ARC has been busy since the last time we appeared between these covers. We ran VE test sessions in Timonium in July and at the F.A.R. Fest in September. The LARC VEC continues to provide free examinations at these special events, at its regular third Saturday at MRC and at various places on the east coast, thanks to the dedication of numerous volunteer. It takes 12-15 volunteers to run an efficient hamfest test session. Naturally, we use Extra Class licensees to administer the actual tests, but we have encouraged holders of other classes of license to help with the paperwork and people-moving, and numbers of them have risen to the occasion. The reason I've heard given most often for helping with the testing is that people view it as a way to give something back to a hobby from which they have derived so much. I'd like to say a special thank you for the help the volunteers have given.

Every year, about the end of September, the LARC provides communications for the Pallotti High School Cross Country Invitational Track Meet. We set up a net control station in a travel trailer, shadow race officials, spot member around the 3.1 mile course, follow the runners with a motorcycle mobile, and have a four wheel drive truck available to transport rescue squad personnel to the site of mishaps. This year heavy rains made the course quite slippery and dangerous for the 850 runners. There were several serious injuries requiring transportation to the local hospital. We added an unplanned feature that proved to be quite a good advertisement for Amateur Radio. There was no telephone in the area and John Creel - WB3GXW, trustee of the 147.225 repeater, used his autopatch to place calls home

for a couple of kids wandering around looking for a phone. Soon we were making periodic announcements on the PA system that we would assist people wanting to make calls in the Washington area via Amateur Radio. Some 30-40 calls were placed, giving a large number of kids and adults a very positive exposure to Amateur Radio. If you are not already doing this with your repeater, you may want to try it at your next public service event.

Our Novice/Tech class, led by Pud - W3DQI and Russ - N3AUQ, is running 20+ participants. At our July meeting the members introduced themselves and talked briefly about what they found interesting about ham radio. (This meeting drew very favorable comments from the members.) Vikki - KA3PVS and Chuck - K4OSV, from the Goddard Club, came by in August and gave an excellent talk on the retransmission program. In September we had an excellent video on antennas provided by Russ - K4OSV. The club is in the process of reviewing and revising its by-laws. Our October meeting will have our annual elections and more discussion on the by-laws. The November and December meetings will be combined in our Holiday Banquet in early December.

LARC membership continues to grow and we now have about 86 members.

Jim - W13N



Goddard Amateur Radio Club

WA3NAN

Meetings:	Third Wednesday of the month at 5:00 p.m. Goddard Radio Club Station, Soil Conservation Road, Greenbelt Maryland, across from the Soil Conservation Road gate of the Goddard Space Flight Center. This road may be accessed from either Route 193, Greenbelt Road, or Powder Mill Road.
Repeater:	146.835 MHz
Net:	Information net every Thursday evening at 9:00 p.m. local time. All Amateur Radio operators are welcomed. Net Control is Pat Gossard - N3KGY
Information:	Chuck Sommer - N4OSD (301) 286-6790 or Vikki Gigante - KA3PVS (301) 249-2609

Holidayfest '92 is fast gaining momentum. The Goddard Amateur Radio Club and Tri-County Amateur Radio Club put this event on each year to benefit Prince George's County RACES/ARES, so please come out and support us on Sunday, December 6 from 8:00 - 4:00 at Prince George's Community College in Largo, Maryland. We already have many committed vendors and the symposiums this year have been set. There will be YL Panel featuring Kay Craigie-WT3P and Ethel Smith-K4LMB on "How I got Involved in the Wonderful World of Amateur Radio." Gary Hendrickson-W3DTN will tell us everything we wanted to know about T-MARC but were afraid to ask; Joe Kasser will speak on Packet Radio, and there will also be a CW symposium. The LARC VE's will give free exams all day and there will be a code speed contest in the afternoon. All in all, it should be an exciting hamfest and we look forward to seeing you all there.

Let's see, there will be a launch on October 21 and then one on November 16. If these are kept straight by our shuttle retransmission director, we'll be in good shape. Everyone has been asking for a training workshop and we will be doing another one early next year. If you would like to become a shuttle retransmission operator in the meantime, call Vikki at (301) 249-2609 and we can work out an informal training session at the club station which will prepare you to work before the formal training occurs. We have wonderful operators and a great deal of fun during shuttle retransmission.

Please come visit during missions, we'll be glad to have to have you. The operators are a great team of people. They keep the missions going 24 hours a day for the duration, and this occurs even when the director isn't there. I was at the Virginia Beach hamfest during the last mission and Jeff Nucciarone did a great job of

keeping things up and running, thanks largely to Joe Grzesik, Bill Dobson, John Stolarik, Marty Brown, John Gainsborough, Gary Anderson, Tony Colella and Pat Kilroy.

I am really proud of our new operators. They have come in and done a lion's share of work since training in February. Marty Brown can probably run the training session next year, even though he has only had informal training (he came in after the workshop). Mel Saltzburg and Stan Siuta are two more brand new operators that are doing a great job, as is Bill Dobson, Joyce Cooke and Tony Colella. Tom Smith has also been there for us as needed. Don't worry, longtimers, we haven't forgotten you, but I wanted to highlight the newest operators in this issue. You're all terrific and deserve many, many hugs!!!

In case you have been wondering about the new voices on the carts at WA3NAN, they belong to Ed Cabic and his son, Eddie Cabic and to Hugh O'Donnell, our early morning operator. This has definitely been an instance whereby someone asked if there was anything that an Amateur Radio operator with a license class below General could help out, and I said, yes, emphatically! Although our frequencies are in the General and above bands, there is plenty of support work that can be done by all Amateur Radio operators. We could use some more help like Ed and Eddie in cart production; There are also phone answering duties to do, trouble shooting and equipment repair; Keeping the control operator awake, etc.; and then there are the times when we just can't find a General Class licensee or above to man the control. Then a Tech Class can become very valuable to at least keep 2-meter operations up and running. So, anyone can help and we would love to have you.

(Continued)

Shenandoah Valley Amateur Radio Club

Meetings: First and third Fridays of each month at 7:30 p.m.
The SVARC clubhouse at 2921 Grace Street in Winchester, VA.
Repeater: 146.22 in 146.82 out
Net: Shenandoah Valley Emergency Net, 7:15 p.m. daily, 146.22/82
Mailing Address: P.O. Box 139, Winchester, VA 22601
Information: Mike Bapist - KD4EPZ (703) 772-6186

Elections for 1993 officers were held at the August 2 meeting. The new officers are:

President: Walter Johnson - WA4HVV
Vice Pres: Irv Barb - KD4BHV
Secretary: Mike Bapist-KD4EPZ
Treasurer: Mike Collins - W4ACC
Trustee: Jack Weaver - WB4SXJ

Charlie-K4LWG gave a report on the building project. Charlie has spent a lot of his fishing time on this, getting permits inspections working with the contractors. The project when completed will give us more space in the main building along with a new two vehicle garage. We will have special ramp and doors for the handicapped.

Sean - WD4RPV gave a report on the recent emergency drill. He said all went well and we learned some of our weak spots, which we will in the future try to correct. September has been a busy month with special events.

We supported the Apple Harvest Festival by setting up radio station complete with packet at the Winchester Park to send messages for people attending the affair. Irv - WD4BHV and Dave - KB4MUJ operated the packet station. Jane - KD4IET did a great job helping people prepare messages.

On September 18 we supported the MS Harvest Bike Tour. There were sixteen of us on this affair. Charlie provided his motor home as shelter from the rain at one of the rest stops. A special thanks to John - KJ4EK who operated the base for the entire time - a very long day for John. It was raining in the early part of the day, yet we had no mishaps or lost people.

Plans are in the works to support the Fort Valley fifty fifty race on October 27.

Walt - WA4HVV

Goddard Amateur Radio Club - Continued

The mugs are here, the mugs are here! Let Chuck or Vikki mug you with one of our shuttle frequencies mugs for \$5.00 each and you'll never forget the shuttle frequencies again.

We will be speaking at the Maryland Mobileers monthly meeting on Friday, November 6. Come and say hello.

The Washington Area YL ARC (WAYLARC) is once again alive! For further information, contact Vikki at (301) 249-2609. We also want to thank you all for the tremendous support of YL WORLD. For every subscription sold at a hamfest, the Goddard Radio Club receives a donation! Thanks, all.

Finally, Joe Kasser - G3ZCZ's new book on packet radio is available from the Goddard Radio Club. Part of the proceeds from the sale of his book through the club will go to the benefit of the Goddard Radio Club. Contact us if you would like to learn everything there is to know about packet radio.

Happy Thanksgiving to all from your friends at the Goddard Amateur Radio Club

Vikki - KA3PVS

Montgomery Amateur Radio Club

Meetings:	1st and 3rd Wednesdays of each month at 7:30 p.m. Executive Office Bldg. Montgomery Co. Government Center, 101 Monroe St., Rockville, MD. Park underground on G-2.
Repeater:	146.355 in (Rockville & Germantown)/146.955 out (Rockville)
Mailing:	M.A.R.C., P.O. Box 611, Gaithersburg, Maryland 20877-0611
Information:	Jeff Horlick - KZ3F (301)258-0112; Steve Todd - K2IYQ (301)253-4172
Training:	Jane Rosenthal - KA3YWU (301) 762-6262; Dick Hayman - K3DML 340-8251

As events unfolded, September proved to be the busiest of months for the Montgomery Amateur Radio Club (M.A.R.C.): the Gaithersburg Foundation for Amateur Radio (F.A.R.) Fest; Gaithersburg Old Towne Day, M.A.R.C.'s Novice/Technician Training Class; and of course, two regularly scheduled, fun-filled M.A.R.C. meetings!

The F.A.R. Fest on September 13 afforded M.A.R.C. our annual opportunity to provide "Talk-in" and "Talk-out" to what is generally considered to be the most celebrated Ham Fest/Computer Fest on the East Coast. Even before the stroke of 0600 hours (Local), Jeff-KZ3F was directing early morning traffic to the North Entrance of the F.A.R. Fest. Throughout the day and long into the afternoon, a spirited complement of M.A.R.C. volunteers supported "Talk-in/Talk-out" activities: In addition to Jeff - KZ3F, we want to commend Stan - W3INK, Event Chairman; and Steve-K2IYQ, Acting Chairman in Stan's absence, as well as the following M.A.R.C. onians who made Talk-in a success: Jim - N3KTV, Don - N3LHZ, John - KA3USB, Bob - NK3I, and Erinn - N3HSA.

No sooner had M.A.R.C. completed F.A.R. Fest "Talk-out" when it was time for the Club to make its presence known to the community at large; i.e., by playing an integral role in Gaithersburg Old Towne Day festivities on September 20! As Event Co-chairmen, Jeff-KZ3F and Alan - N3EHD, planned M.A.R.C.'s activities down to the last detail—with the result that approximately 35 Club members actively participated (not including spouses, children and friends):

Tom - N3LGF, Jim - N3KTV, Bob - N3JLN,
Joe - N3KRQ, John - N3HBX, Josh - N3KHU,
Jane - KA3YWU, Harry - K3CMX, Dick - K3DML,
Ken - KD3VK, Dio - KE3DS, Cathy - N3ICW,
Pierre - KB3ZM, Ron - N3KQY, Al - KN3U,
Tim - N3MRF, John - KA3USB, Matt - N3LFZ,

Tim - N3LQK, Al - NW2M, Steve - K2IYQ,
Bob - N3LDI, Jeff - N3LWE, Tom - WB3DIO,
Tom - AA3AC, Bob - K3USH, I.J. - K9ICF,
Jeff - K3DUA, Jim - W6NRJ, Ken - N3JBU,
Mike - KA9ZKV, Sal - WF3V, & Erinn - N3HSA.

All in all, Gaithersburg Olde Towne Day was a great success with beautiful weather and a tremendous turnout. Set-up occurred between 9 a.m.-11 a.m.; the Festival and operations took place between 11 a.m.- 5 p.m.; and take-down lasted approximately 45 minutes between 5 p.m. and 6 p.m. "Field-Day" style was apparent in the commuter parking lot in the middle of town—there were two HF stations—both on battery, one with solar panel assist; in addition, there were two packet stations with generator backup to batteries; as well as a VHF-FM station. Antennas (donated by Ken - KD3VK, Alan - N3EHD, and Rick - K3YNY among others) included two portable masts holding a 40-meter dipole, 20-meter dipole, and 2-meter j-pole; there was an R7 multiband vertical antenna; and other 2-meter antennas.

During the course of Gaithersburg Olde Towne Day operations, M.A.R.C. worked 20-plus states and 10-plus countries, including Hellilla in North Africa! A new Ham, Julie - KA3ZRQ, about 10 years old, made her first ever contact to G3EIG on 10 meters! And of course, M.A.R.C. was proud to show off its brand new 4-foot by 10-foot Club banner—skillfully "crafted" by Jim-N3KTV. An Olde Towne Day Special Event QSL card is going out to all who ask; more than a dozen requests have been received to date. Last but not least, M.A.R.C. received high marks (and good visibility) for demonstrating how Hams can set up an emergency communications system for use after natural (or man-made) disasters.

(Continued)

Metropolitan Communications Network

Representing Six Meters in the Greater National Capital Area

Meetings: Quarterly, on the second Sunday of the month.
Time and place to be announced.
Repeater: N3AGB/R, 52.250 MHz in; 53.250 MHz out.
Accessible on 147.36 MHz and 444.35.
On-the-air: Saturdays at 2000 hours EST
Mailing: Bob Sporn - WA3GGO, 9927 Cottrell Tr, Silver Spring, MD 20903
Information: Bob Sporn - WA3GGO (301) 434-1719

A nominating committee has been established to furnish candidates for the various offices for 1993, for the elections during the December meeting. At the previous meeting, it was reported that new antennas will be placed at the various satellite receiver sites. At the time of this writing, 6-meter FM is not operating. Our Saturday night net has been working, thanks to the generosity of the Alexander Graham Bell Telephone Pioneer' 2-meter repeater, 147.36. Hopefully, by the time November *Auto-Call* is issued, the FM portion will again be in operation.

THE SUNDAY MORNING COFFEE NET (50.4) MHz at 0900 Hours

A warm welcome back to Packy - AE3O of Mt. Airy, who has been away from 6-meters since two wars ago. Our treasurer,, David Bennett, KE3AB had to go to his home in Florida to repair the ravages of Hurricane Andrew. The home of our president, Bob Milligan - KI4MB, suffered water damage as a result of Danielle. Nevertheless, 6-meters was on the air. Stan Brigham - W3TFA needs only 15 more countries to complete the 200 necessary. Please make a note to reserve 10:00 a.m. Friday, Christmas day, December 25th for our annual Xmas Net.

MARYLAND FREE STATE 6-METER SIDEBAND NET (50.125 MHz) Sundays at 2000 Hours

As usual, the Net has been operating, but we would like to see an increase in participation. Let us hear from you.

Bob - WA3GGO

Montgomery Amateur Radio Club - Continued

The Amateur Reporter would be remiss if this issue went to print without noting the splendid '10-10' program meeting jointly presented by John - KA3YJA and Frank - WB3BMA on September 16. These two experienced Hams regaled 40 or so M.A.R.C.onians with slightly exotic tales related to the history of, requirements for joining, and paper-chasing activities associated with '10 10' nets. Collecting ten '10-10' numbers on 10 meters is merely the beginning of a sub-hobby that can lead to--who knows what or where? Perhaps a 'Crazy-8' net in Pennsylvania; a 'Sky-Blue Waters' net in Minnesota; possibly even the exclusive 'White House' net--you get the idea... (sorry, the "Butterfly" net is apparently extinct.)

Please be sure to check this column next month for updates to the on-going M.A.R.C. Novice/Technician Training Class; til then, let's all make a note to stay 'clear and listening' to 146.955 MHz.

Erinn - N3HSA

Tri-County Amateur Radio Club

Meetings:	Semi-annual business meetings, time and date announced on the air and in the club newsletter.
Repeater:	KA3LAO/R, 147.780 MHz in; 147.180 MHz out.
On-the-air:	Tuesdays at 1930 hours (Local time). Amateur Radio Newsline Tuesdays at 1915 hours (Local time).
Mailing:	P.O. Box 10592, Silver Spring, MD 20914

The Goddard and Tri-County clubs are in full gear now that we are now only one (1) month away from our second annual hamfest, Holidayfest '92, to be held at the P.G. Community College, Largo, Maryland, on December 6, 1992. Tri-County members who have not yet let the club officers know when you can help during the hamfest, please do so quickly so we can make sure all necessary areas are covered. Even if you are not a member of Tri-County or Goddard you are invited to participate. If you are interested in helping or would be interested in space at the Hamfest, please call the Holidayfest '92 hotline at (301) 572-2326 and leave your name and number. A committee representative will get right back to you. Make sure that you join our Tuesday on-the-air net for any late breaking news concerning the planning of this event.

For autopatch users, the patch is still utilizing its backup circuit which means that the speed dial feature is not active. We do not expect it back to its normal operating mode until after the hamfest. Remember that due to its location, when 911 is called through the patch it is the Montgomery County Operations Center that will answer. Be sure to clearly identify the nature of the emergency, its location, and emergency services required.

We would like to recognize the passing of an era in Amateur radio with Heath Company's discontinuance of amateur radio equipment and kits. While the economic impact of rapidly changing component technology and the introduction of microprocessor techniques on kit building is fairly understandable, its passing is still a time for reflection. For those of us who have been with Amateur Radio for a number of years, who can forget the time we spent constructing the DX-100s, or the LunchBox series, or the SB line of HF equipment. The construction of the wide range of test components was likewise a challenge. Of course we spent most of our time trouble shooting

mistakes but that was part of the challenge. There was nothing quite as satisfying as completing all the check marks in the Heath assembly manual and firing up the unit for the all important "smoke test". What a thrill it was to actually see the product of all that work actually function. In this day of buy and immediately operate we don't want to forget the need for all of us to maintain our technical proficiency and trouble shooting skills. With that we say a fond farewell to an old friend, HeathKit.

Heard On The Repeater: This feature of our report attempts to provide useful suggestions for efficient and effective use of the repeater:

- o It is interesting to hear some of the recent conversations about conversations on the machine. It is amazing that there are a number of critics who will listen in on repeater conversations and later complain about what was said or the person saying it. Since we are getting close to the season, we say HUMBUG to them. Communications is what Amateur Radio is all about. Let's encourage these sideline sitters to jump in and share their thoughts on the topic at hand instead of griping about it later. Open conversation can be fun, give it a try, you may find that you like it. Besides, what good is a repeater that just sits idle all the time?

- o Speaking of listening, a word of caution is in order. We need to constantly remind ourselves that there are a significant number of individuals who listen in on Amateur repeaters throughout the area. While many of these individuals are curiosity seekers, there is that undesirable element out there listening also. Be careful not to discuss in detail times you will be away from home or other personal matters that may be of use to this element. Our call signs are quite easy to look up for anyone so inclined. Forewarned is forearmed.

(Continued)

Fauquier Amateur Radio Association

Meetings: Second Tuesday of each month, 7:30 p.m. Local. No July or August meetings.
Shadow Lawn Center, Warrenton, Virginia.
Repeater: NZ4N/R 147.165 Mhz out; 147.765 Mhz in.
Digipeater: K4LLQ-5 145.070 Mhz.
BBS: N4YXW-1 145.090 Mhz.
Net: Every Wednesday night at 9:00 p.m. Local, NZ4N/R

The September meeting was called to order at 1930 hrs by the President, WY2V.

The meeting was then turned over to our guest speaker, Howard Reynolds, WA3EOG. Howard gave an excellent presentation on VHF and UHF weak signal operations and the do's and don'ts of assembling a station. He is an avid tester, and often travels to West Virginia to put a rare grid square on the map.

WY2V had some nice words to say about our club outings at Vint Hill Farms Station and

Field Day, both in June. Special thanks were given to the following people for their contributions:

KC4UOL, KB4UZL, KC4SYX, KC4SYY, K4LLQ, AB4YK, N4YXW, N3ND, and W4NHJ. A special thanks went to K4LLQ and W4NHJ who graciously allowed the use of their calls for the special event station and Field Day respectively.

Six club members provided communications at Great Meadows for a horseback riding event for the handicapped.

Coming events:

- September 19 - Tour de Fauquier bike-a-thon and Amateur Radio Awareness day.
Amateur Radio Awareness Day is to be held at Radio Shack in Warrenton.
October 3 - Lion's club walk-a-thon at Airline.
November 16 - VEC testing session at Jefferson Savings & Loan, Warrenton Center.

Hope to see all at the October 13 meeting.

Dan - N3ND

Tri-County Amateur Radio Club - Continued

o The word needs to be passed to the non-Auto-Call community (since we have discussed this before) that one should always listen before transmitting. Quite a few times over the past month it is obvious that there are some who do not subscribe to this courtesy. A number of on-going conversations have been interrupted by individuals obviously "popping" in from other machines and immediately taking up where they left off. Polite reminders may serve to reduce this practice.

Now that cooler weather has become an activity limiter for many folks why not join the Tri-County on-the-air net which meets each Tuesday at 1930 local. If you are listening at 1915 you will hear the latest NewsLine information, ARRL bulletins, and the latest exam schedules throughout the area. NewsLine is an amateur radio news service from California which always has information of interest to the Amateur community.

See you next month!

Greg - WA3FSC

Digital Mid-Atlantic Radio Council

Meetings: Next on November 21, 1:00 PM at Anne Arundel Radio Club
February meeting for election of officers at Andrews AFB
Information: George Stickler, KA3DXX @ KA3DXX - Secretary (410) 551-7657
8249 Quarterfield Road, Severn, MD 21144
UserGroup: Maureen Mulrooney, N3JNE @ KA3RFE (410) 798-4204 in Davidsonville, MD
TechHelp: Dick Wareing, K3AKK @ WB3V (703) 524-1727 in Arlington - afternoons and evenings

At the September general meeting, Maureen - N3JNE presented the USERS Group view of BBS and network operations. Her many recommendations have been implemented. We now have a Wednesday USERS net on the DCCONV chatnode at 9 p.m. on its Channel 13. To join in, Connect to a local linking node and CDCONV. Then do a /CH 13 and say hello to the group. A /W will list connectees.

Tom - W3IWI, a DMARC Board member, headed a group that made a presentation to the ARRL Digital Committee. This resulted in a major modification of the ARRL position on the digital mode and in a positive recommendation to the FCC on digital automatic message forwarding. Well done, Tom! In addition to representing packet and digital interests to the ARRL Digital Committee and VHF Advisory Committee, DMARC coordinates and manages VHF/UHF frequencies used for digital communication in the DMARC area.

Mark - WA3ZNW has provided a Motorola Micor base station for use at the ELK6 node site. The dedicated 6-meter internode backbone links the WashDC area to Annapolis and through the remote Elk Neck, MD node site, to Philadelphia. In addition to providing a BBS forwarding link, users now can connect to the PHLNET chatnode in Philadelphia and to distant BBS.

A new networking node, DCA5:K3AF-5, on 51.680 will be on line this month. It is an open, mixed use node and connects to the local network. With 100 watts and a groundplane antenna on the 350' tower, it should have a wide ranging signal. Additional mountain-top nodes are planned for western Maryland and near Charlottesville. This network will serve users throughout the DMARC area and beyond.

The November meeting will feature a presentation by Doug, N2GTE, on BBS utilization and software with emphasis on USER concerns. Doug's 'GTE BBS software is in use by many local BBS includes an "NTS Server" for semi- automation of ARRL NTS messages.

1st MID-ATLANTIC PACKET QSO PARTY

Object: For stations to exchange QSO information with as many other stations as possible on VHF/UHF packet. The use of simplex, network nodes, digipeaters, and converse nodes is allowed and encouraged.

Contest Period: On Saturday, 14 November, 1992, from 7:00 p.m. to midnight.

Entry Categories: Single operator only: one person performs all transmitting, receiving, and logging functions.

Exchange: A consecutive serial number, name, county and state.

For example, K3ORC and N3BFO are in QSO in the contest:

K3ORC calls: CQ PKT PARTY DE K3ORC.
N3BFO answers: K3ORC DE N3BFO.
K3ORC replies: N3BFO. TNX FOR CALL. NR 22, TOM, QUEEN ANNE'S, MARYLAND
N3BFO replies: GE TOM. NR 24, WALT, ANNE ARUNDEL, MARYLAND GOOD LUCK.
K3ORC replies: TNX WALT. GOOD LUCK.

Herndon Repeater Group

Meetings: On-the-air meetings every Monday at 9:00 p.m.
Repeater: N4FSC/R 144.71/145.31 MHz
Packet BBS: 145.09 MHz (BBSHRG)
Mailing: Herndon Repeater Group, P.O. Box 5073, Herndon, VA 22070
Training: Michael Weber - WB8RDN (703) 450-2304
Information: Michael Rosati - N4FXP (703) 481-8380

Training Classes: Herndon Repeater Groups second annual Novice/Technician course will be concluding on November 14, with over 45 new Hams the end result. In addition to thanking the course instructors in last month's *Auto-Call*, thanks also goes to the following HRG members who helped make the class a success: Mike - N4FXP, Craig - N4FSC, Craig - WA3RGH, Gary - KD4SRX, Steve - KA1LM and of course, the Trinity Presbyterian Church.

Next Exams: HRG will sponsor another ARRL/VEC exam session on Saturday November 21, also in Herndon. Register with Mike - WB8RDN.

New Members: HRG welcomes the following 9 new members: Tim and Linda Duke; Howard Ellis; Ansley, Bryan and Craig James - WA3TTI; Ron Robins, Bob McCulley and Ken Senser. Most of these new members are in the current HRG training class.

Picnic/Fox Hunt: HRG sponsored a picnic and Radio Fox Hunt on Sunday October 4 at the Lake Fairfax Park in Reston. Additional details and photos will be provided next month.

Congratulations: Congratulations to Gary Rinker on his new callsign - KD4SRX.

Mike Weber - WB8RDN

Digital Mid-Atlantic Radio Council - Continued

Scoring:

- QSO Points: Each QSO counts 2 points. Work each station only once.
- Multipliers: Each different county worked counts as a multiplier.
- Final Score: Multiply QSO points (two per QSO) by the number of counties worked.

Reporting: Entries should be mailed to David Hubbard, WD4IEH, 1538 Lodge Pole Ct, Annapolis, MD 21401 by 1 December. Logs should contain the time of the QSO, call sign of the stations worked, complete exchange sent, complete exchange received, multipliers marked the first time worked, and QSO points. A summary sheet containing your final score should also be included. Please send in your soapbox (comments) for inclusion in the results write-up.

Awards: A plaque will be awarded to the top finisher and certificates will be awarded as participation merits.

Miscellaneous: While you can make QSOs by simplex or hanging around you local network node, converse nodes are a great way to rack up points (and meet fellow packeteers) in a hurry. Converse nodes are special nodes with many "channels" that behave much like a telephone party line. Everyone on your channel sees everything you type and vice versa. There are a couple of converse nodes in the area. DCCONV is accessible via the DCA node stack (and appears on most local node lists) and PHLNET is a converse node located in Philadelphia. Since each converse node allows for 250 channels, we can minimize QRM if we spread out and use several channels during the QSO Party. Converse node etiquette suggests moving off the initial connect channel, (Ch 0), for QSO.

Dick Wareing - K3AKK

T-MARC

The Middle Atlantic FM and Repeater Council

Frequency Coordinating Committee
1419 Larch Road, Severn, MD 21144

Recent Coordination Activities

In August the committee re-coordinated the Kent Island A.R.C.'s two-meter repeater from its old frequency of 145.350 MHz onto 146.940 MHz.

The committee re-coordinated the XTRA-104 Radio Club's repeater at Waldorf, Maryland, which had been operating on the T-MARC area "Repeater Builder's Channel" (145.170 MHz) onto a permanent frequency pair, 144.750 MHz in/145.350 MHz out. (N.B. All frequencies listed with a slash between them, by convention, indicates frequency IN/frequency OUT.)

K3SP's repeater was re-coordinated, which had been operating on 145.21 MHz at Lutherville, Maryland, to a new frequency pair, 146.22/146.82 MHz, at its new location in Cockeysville, north of Baltimore, Maryland.

During the September committee meeting, three proposed slave "simulcast" repeater transmitters were coordinated to the XTRA-104 Radio Club, to operate in parallel with their 145.350 MHz repeater at Waldorf, Maryland. These other transmitter sites will be near Warrenton and Winchester, Virginia, and Harpers Ferry, West Virginia. These sites will also have receivers on the repeater input, which will work into a master receiver voting system.

222-225 MHz Band Plan Reminder

As a reminder, the 222-225 MHz band plan which is recognized in the T-MARC area is essentially the same as the ARRL-recommended "interim" plan which was adopted by the ARRL Board of Directors last year.

222.00-222.15	Weak signal modes (CW, SSB, EME, Beacons, etc.)
222.15-222.20	Control, links (2 channels at 222.16 & 222.18)
222.20-223.38	Repeater inputs (222.20 is "Repeater Builder's Channel" input)
223.40-223.50	FM voice simplex (NO DIGITAL OPERATION) 223.50 is national simplex calling frequency
223.52-223.78	Digital (possible 100-KHz wide-band channel centered at 223.65)
223.80-224.98	Repeater outputs (223.80 is "Repeater Builder's Channel" output)

All T-MARC information is provided by the Frequency Coordinating Committee and/or by the Board of Directors through the Vice-President for Public Affairs.

Annual Meeting Activities

The T-MARC membership adopted a policy amendment which reads "The sponsors and users of un-coordinated systems will not receive any consideration or interference protection from the operation of existing or future coordinated co-channel or adjacent-channel systems."

AUTO-CALL was designated by the T-MARC membership to be the principle publication for the dissemination of T-MARC information.

(Continued)

Springfield Estates Elementary School ARC

Meetings: 1st Friday of each month at 7:30 p.m., Springfield Estates Elementary School, Room 2, 6200 Charles Goff Drive, Springfield, VA
President: Ben Mudrak - KD4CNV (703) 971-7710
Vice Pres: Will Schmitt - KD4CNX (703) 768-5709
Secretary: Luke Ward - KO4IQ (703) 922-6545
Treasurer: Rirchelle Brown - KD4MFB (703) 690-0129
Mailing: SEESARC, 6200 Charles Goff Drive, Springfield, VA 22150

Our demonstration at school on September 23rd worked out nicely. Several kids from the fifth grade came down two at a time to help out with showing the equipment, QSL cards, maps, and those things at the station in room 2. Grades 3 through 6 came down to listen to half-hour talks about ham radio. Both 2-meter and HF QSOs were made during these sessions.

On September 25 we had an organizational meeting at night. The purpose was to explain more about the club to interested students and their parents. Twelve new families attended. We got one HF contact from Mississippi. We also demonstrated 2-meter packet radio and the use of the packet bulletin boards and nodes, such as DCA, SMD, WA3TAI, and WA5ZAI. Parents were given literature about the club and were invited to come to the next meeting in October.

Our first meeting on October 2 was well attended. The speaker we were planning to have was unable to come at the last minute. Instead, Luke - KO4IQ demonstrated Baudot and AMTOR communications on 20-meters. We had a good Baudot contact with a ham in San Antonio. Keith - KO4IO, also showed the shareware program TRAKSAT, which can be used to

determine the ground path of satellites as they orbit the earth.

The club voted to join FAR, and four students volunteered to write Auto-Call articles in the next four months. Two reporters from the Franconia Gazette visited, and they interviewed some of the officers in the club, and took photographs of club members gathered around the demonstrations. Bill Schmitt - KD4CNS, handed out syllabuses for new members wishing to take the SEESARC Novice classes, which will begin on October 23. In addition, he distributed a club copy of "Now You're Talking" to each of the ten families planning to take the classes. The Kenwood K.I.D.S. program provided these textbooks free to the club last year.

We received a packet message from former club members Dave Cowhig - WA1LBP and Frances Cowhig - KD4BMJ. They live in Okinawa now, in a house on top of a hill which is very good for ham radio, and great for getting into the local 430 Mhz repeaters. Dave has a new Japanese callsign now! His packet address is 7J6CBQ@JR6RMV.47.JNETR6.JPN.AS.

Submitted by Luke Ward - KO4IQ

T-MARC - Continued

Gary Hendrickson, W3DTN, secretary to the T-MARC Frequency Coordinating Committee, expressed to the T-MARC membership his wish to step down by the 1993 Annual T-MARC Meeting. A discussion on secretarial duties and job aids ensued. Volunteer(s) for the position of frequency coordinating committee will be sought.

Various member organizations in T-MARC have expressed an interest in forming a joint radio direction finding project with interested individuals, clubs and organizations to include fixed and mobile triangulation, and signature analysis. Bill Werner, W3EAO, volunteered to serve as committee chairman and would like to hear from persons interested in participating in the project.

Woodbridge Wireless, Inc

Meetings: 2nd Tuesday of each month, at 7:30 p.m. Canterbury Woods
Repeater: WB4FQR/R 147.84/24 and 449.9/444.9
WB4GJZ/R 223.18/78
Nets: Mondays, 8:00 p.m. local (0100 UTC) 147.84/24, 223.18/224/78
(the repeaters are linked for the net.)
Wednesdays, Slow CW at 8:00 p.m., 21.164 MHz
Saturdays 9:00 p.m. - in new 10 Meter Novice band 28.460 MHz SSB
Mailing Address: P.O. Box 112, Woodbridge, VA 22194

Annual Meeting: 2nd Tuesday, 8:15 PM at Canterbury Woods Community Center, Lakeridge, VA.

Welcome to hamming, South of the Occoquan style. In this report: the rabbit got caught; WWI has its annual meeting; WWI gears up for CQWW.

Congratulations to Jim - KA4CKI who was the first to find the very elusive rabbit (Barr - K5ESO). This emergency exercise is used to sharpen our directing finding skills. Those skills come in handy when tracking down interference, downed aircraft, etc. Participants included (in addition to Jim and Barr) K4EBS and son, WD4KXB, KA4RRU, KQ4AX, K4HWG, KJ4VG, and two out-of-town hunters, N4TPY and N4USI. It took Jim 2 hours to find the rabbit hiding deep in the woods behind the Mobile station at Minnieville Road and Dale Blvd. He varied his 50-watt transmitted power into 11-element beams pointed at a water tower. Hunters milled around for an hour tracking reflections. Equipment for hunting can be complicated or as simple as a handy with a rubber duck. Jim will be the next rabbit, date to be announced.

October marks the official WWI annual meeting night, the night new officers are elected

for the coming year. Check this space next month for a list of the new officers.

On October 24 and 25 the CQ Worldwide DX phone contest happens, the CW portion is scheduled for November 28 and 29. WWI contesters need to note their club affiliation when sending in their scores. Last year, the club had a cumulative score of 2,710,832 points, beating out 26 DX and contest clubs. About 5 WWI-ers participate in these contests regularly; KA4RRU, KJ4VG, N4LJS, WB4RDV and WD4KXB. Multi-operator contest parties are encouraged.

The fall crew race event is gearing up and WWI communicators will be providing their services for health and safety. Its the Head of the Occoquan crew race which will see teams from all over competing to see who is the "head". Check with Bob - NQ4K if you can help.

That's it for now...practice CW and help someone whenever you can. Remember, the radio spectrum you save may be the part you use.

Jim - WJ4M

Amateur Radio News Service Publication Contest

The Amateur Radio News Service is now accepting entries for its national 1992 Publication Contest. The contest is open to all Amateur Radio organizations. Membership in ARNS is not required.

The contest is aimed at identifying and recognizing superior performance in Amateur Radio journalism. To enter your newsletter, submit one copy of any issue published during the period July 1991 through December 1992. For further information and an application, write to:

Amateur Radio News Service
11 S. La Salle Street, Suite 2100
Chicago, IL 60603

AMRAD

Amateur Radio Research and Development Corp

Meetings: Second Thursday of each month, Fairfax County Library, McLean, Virginia
Repeater: WD4IWG 147.81 MHz in, 147.21 MHz out. Director, Jeff Brennan - WB4WLW
WD4IWG is an open repeater for FM voice and digital communications, especially for experimental modes. Autopatch available to members.
Data Address: Our internet address is lkestel@csugrad.cs.vt.edu.
AMRAD CBBS: (703) 734-1387 Operated by Lawrence Kesteloot - N4NTL
E-Mail address is lkestel@csugrad.cs.vt.edu
Information: Andre Kesteloot - N4ICK (703) 356-5519 or Terry Fox - WB4JFI (703) 698-7612

The featured speaker at the September meeting was Richard Rucker - KM4ML, who gave a presentation on Air Traffic Control Systems: *Communications, Surveillance, and Computers*. The October program was a presentation by Jim Scheimer - AC4SV, entitled *Seismology, Radio, and DSP*.

Current and Up-Coming Activities:

The 10-GHz Contest is over, with mixed results. The cold and wet weather of the first weekend, August 15-16, saw a total of seven hardy 10-GHz contesters engaged in mountain-topping on Reddish Knob and Bald Knob, and roving along Skyline Drive. Five contesters

were active during the second portion of the 10-GHz contest, September 19-20. While the annual 10-GHz contest is over, we intend to continue this microwave activity in building and experimenting with equipment, as well as excursions to mountain tops for field activity.

Anyone interested in technical topics or any of the AMRAD projects is welcome at the monthly meetings, or at the weekly luncheon. We meet every Saturday @ 1230 hrs., at Taco Rio Grande on Rte. 123 in Vienna. AMRAD repeater for talk-in.

Dave - N4JGQ

Arlington Amateur Radio Club

Meetings: Third Tuesday of each month at 7:30 p.m.
Arlington Red Cross Chapter House, 4333 Arlington Blvd. (Rte. 50)
Net: Tuesdays (except meeting nights) at 7:30 p.m. on 144.87/145.47 MHz FM
Info: Robert D. Milligan - KI4MB, (703) 533-0650

At the September 15 meeting of the Arlington ARC, Tom - N4BYF reported that he and Tom - W4LMW had investigated and tried to stop the occasional RFI to two Red Cross telephones caused by operation of the club's station, located in the same building. They tried using two Telco RFI filters borrowed from home; this corrected the problem with one desk set but rendered the other inoperative.

The club decided to buy two such filters, to leave one on the Emergency Services desk set (thereby solving the problem with it), and to try to find another similar desk set in the Red Cross (which could likewise be fixed) and swap it with the one that couldn't be fixed.

Mike Callaham-NW3V presented a short program on working "EasySats" (See September QST) and handed out schedules of predicted satellite passes over Arlington.

Activities Chairman Jim - AB4YP said he would try to book a speaker from Metrovision for the October 20 meeting. No program has been announced for the November meeting, at which 1993 club officers may be nominated (for election in December).

On October 6, participants in the Arlington County Net heard a familiar voice, that of Frances Milligan - KD4AXW, in a new role: NCS. Thanks for subbing, YL!

Mike - NW3V

Carroll County Amateur Radio Club, Inc.

Meetings: 2nd Monday at 7:30 pm, Carroll County E.O.C.
Washington Road (Rte 32) 1 mile north of route 97,
Westminster, MD.
Repeaters: 145.41 MHz, 449.875 MHz
Mail : CCARC, Inc., P.O. Box 2099, Westminster, MD 21158
BBS : K3PZN, 145.03 MHz

It's about time! The Carroll County Amateur Radio Club, Inc. is now a member club with the Foundation For Amateur Radio, Inc. Thanks goes to our recent president Jim Erickson - K3LFO for informing Phil Russo - N3GDD about our club up in north central Maryland.

I guess Phil was very impressed with our club. Not that we're probably the fastest growing amateur radio club in the state! Maybe it was the way we had applauded him at the end of his presentation. Anyway, he asked us to set up the First Ever special event station at the F.A.R. Fest in Gaithersburg. The plan was to have an HF station and a 2 meter station on the air from 3 p.m. Saturday until 3 p.m. Sunday.

When the club members were informed of the special event station, volunteers were not exactly rolling in. With many of our members having been licensed amateurs for less than 2 years, I suppose many of them thought this special event was going to resemble field day operations, and were shying away. Also, many of the members didn't think they could participate because "Gaithersburg" was THE Hamfest in which they make a point to attend. We accepted to do the station anyway. Two weeks before the hamfest we had enough volunteers for only a Sunday operation.

We set up the station, consisting of a TH6DXX on a 40 ft tower, dipoles for 40 and 80 meters, TS-440 and TS-520 radios for HF, with a G-6 and an all mode on 2 meters, Saturday afternoon with the tower assembly beginning at around 2 p.m. We were on the air with the first contact occurring around 5 p.m. Contacts were made until 11:30 p.m. Sunday we started up again around 7 a.m. with operations continuing through 2:30 p.m. We ended up making 248 contacts. Mostly on HF with a few on 2-meters.

We started with 7 volunteers and ended up with 13. Once we got the station up and operating, the excitement hit. So, many of the volunteers stayed longer than they had planned to.

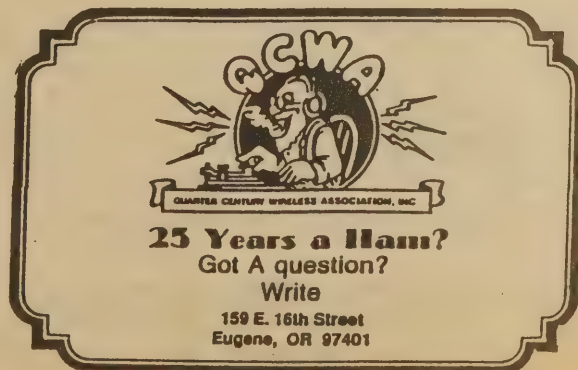
Also, this was a great opportunity to give our No-Code Techs an experience of operating on the HF bands. We had arranged for a general or higher class operator to be on shift at the same time to act as a control operator of the station. Consequently, there was very little operation of the 2-meter station.

I do believe if we are asked to do this special event station again next year, we will have a much better turn out, and a lot more fun!

I would like to thank Ralph - N3KZS and Kim - N3LTM for the use of their camping trailer as our operations center.

The volunteers that made this FIRST special event station happen were: Doug - N3CWG, Harold - N3GFZ, Rich - N3JIA, Bill - N3GWV, Dave - N3KOQ, Ralph - N3KZS, Jim - K3LFO, Kim - N3LTM, Jean - N3MAE, Steve - N3SB, John - WZ3S, Ralph - AA3AM, and myself, Larry - WX3F.

Larry - WX3F



Southern Maryland Amateur Radio Club

Meetings: 2nd Friday of each month at 7:30 p.m.
Church of the Nativity, 5203 Manchester Dr., Temple Hills, Maryland.

Nets: Tuesdays at 8:00 p.m. on 147.75/15 Repeater
Thursdays at 8:00 p.m. on 28.447 USB

Packet: WA3TAI full service PBBS in Ackokeek, MD
145.03 & 446.075,
SMD (WA3TAI-5) NET/ROM Node in Ackokeek, MD 145.03

Repeater: W3PT/R 147.75/15, Cheltenham, MD. Autopatch to 911

Mailing: P.O. Box 273, Cheltenham, MD 20623

Information: Vic & Linda Curtis, WA3YUV & KA3VNI (301) 888-1388

SMARC has had a busy summer and is planning an even busier Autumn!!

Novice Training Classes are in progress, 7-9 p.m., Monday evenings at the Church of the Nativity, 5203 Manchester Drive, Temple Hills, MD. Contact AL - W2GJS, (301)868-0399 or Ray - WI3A, (301)894-0606 for more information.

SMARC's next scheduled VE Testing Session is November 20. Contact Ray - WI3A (301) 894-0606 for information.

We will be helping to set up and operate the W3USS station at the Blessing of the Fleet on St. Clements Island October 3-4.

One of SMARC's members, Vic, WA3YUV, went down to help victims of Hurricane Andrew in Homestead, Florida in August. He took with him supplies in the form of plywood, gas, water, food and much needed and appreciated generators and lanterns from another club member, Allen - KA3ZPA. Vic gave a talk at the September SMARC meeting on what he saw and did. With a tear in his eye he spoke of folks he had met who had lost pretty much everything. Today, over a month later, the newspapers

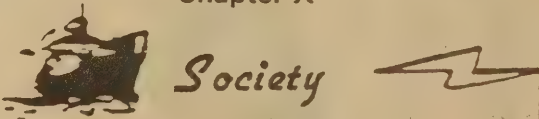
report that power has been restored... to those who still have houses; but reports from friends proclaim... don't forget about us, we still need help—this place is a mess!

Well, Autumn is here... the air is crisp and cool, the leaves are beginning to turn brilliant colors, the nights are clear—perfect for stargazing!! Bet you didn't know that SMARC has among its ranks many avid astronomers with some fairly impressive telescopes. SMARC's "Star Parties" are often scheduled at the last minute, so if you are interested in attending one of these stargazing parties, monitor SMARC's repeater during a stretch of clear nights—if a "Star Party" is being planned, you'll hear about it!!!

It is not too early to start thinking about making reservations to attend SMARC's Christmas Dinner Party. It is an event not to be missed—good food, good friends, lots of laughs and door prizes. It is being planned for Friday, December 11. The dinner party will be held at Camp Springs Elks Lodge. Contact SMARC for more information.

Linda - KA3VNI

Chapter X




Society

of Wireless Pioneers

THE INTERNATIONAL ORGANIZATION
OF PROFESSIONAL RADIO TELEGRAPHERS

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JOHN T. NUTTMANN, CPA

Vienna Wireless Society

25 Years of Public Service

Meetings: 2nd and 4th Fridays of each month, 7:30 PM
Vienna Community Center, 120 Cherry Street, Vienna, VA
Repeaters: K4HTA/R 146.085 in/146.685 out, 222.340 in/223.940 out,
448.250 in/443.250 out, 443.375 in/448.375 out
Nets: Vienna Emergency Net every Thursday at 7:30 p.m. 146.085/146.685.
Pow Wow Net every night except meetings at 9:00 PM on 28.444
Slow Speed Code every night except meetings at 8:30 p.m. 28.390 MHz
Information: Margy Patterson - N2JRG (703) 620-1727
Training Classes: Paul Wilkins - AB4CY (703) 560-2779
Mailing Address: P.O. Box 418, Vienna, VA 22183

Paul Rinaldo - W4RI, spoke at our September 11th meeting. He spent the past few years working for the ARRL, preparing for WARC. He spoke to us about the Amateur spectrum and our chances of holding on to it. WARC will now meet every two years instead of four. Spectrum is a finite resource and it seems everyone wants more of it. Many Amateur bands are shared with other services. He feels that the Amateur community must not only be good spectrum partners but must also continue to experiment with new technologies (such as high speed packet and other digital modes) to hold onto the spectrum we have.

Our September 25th meeting turned our attention to packet radio. The VWS repeater/packet committee has been very active and they have some great plans for the future. For those of us not using our packet stations often or at all we were given a hands on lesson. Many hams without packet stations received some basic instruction. Hopefully everyone learned something!

VWS meetings are on the second and fourth Fridays of the month and are held at the Vienna Community Center. Everyone is welcome to attend.

Margy - N2JRG

Overdone

Amateur Radio operators must really love their call signs. About half of their conversations consist of repeating their call. Most of it isn't necessary at all.

Years ago, FCC rules required all transmissions to begin and end with the exchange of call signs. But these rules were relaxed over ten years ago and those exchanges are no longer required. Let's look at the present rules (97.119). ... "Each Amateur station ... must transmit its assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication... Notice this says "at the end of each communication," not the end of each transmission.

I still like the idea of transmitting our call signs at the beginning of a communication, only as a courtesy to the other Amateurs in the communication, but then we don't need to send it again for 10 minutes - unless we sign out/end our communications before then.

If there are only two persons communicating, just let up on the PTT switch. If there are more than two persons communicating, indicate the person who is supposed to transmit next. (Don't just drop the PTT, thereby leaving the rest of the group in limbo - unless, of course, you are the last person in a group to sign off.)

Old habits die slowly, but try this method for a few weeks and see whether your communications become more interesting.

The above item was inspired by an editorial by Loyd Davis - K8EI which appeared in the October issue of the Woodbridge Wireless newsletter "Wireloose."

Prince George's Wireless Assn.

Meetings: First Working Tuesday of each month, 7:30 p.m., American Red Cross Service Building, 6206 Belcrest Road, Hyattsville, MD 20782

Club Station: K3CEZ

Mailing: 4109 Kennedy Street, Hyattsville, MD 20781

Information: Frank Holton - WA3ZMW (301) 927-1245

The Gaithersburg Hamfest was as interesting and fun-filled this year as it has been in the past. Our hats are off to all those of the Foundation for Amateur Radio who work so hard from year to year to make it such a success.

Members of the PGWA not only enjoyed attending, but were able to find just what they were looking for and at the right price. The club decided to look for a new Tri-Bander beam, smaller than the TH6-DXX that had to be taken down. We succeeded in buying a Cushcraft A3S beam at the lowest cost available and had it shipped to Frank - WA3ZMW's QTH within two days after the Hamfest. I am proud to say, after a few days work the new beam shines brightly in the sun from atop the Red Cross Building here in Hyattsville.

Thanks to Dan - W3SWD, Frank - WA3ZMW, Charles - KA3COT and Ken - N3HLY who worked so diligently, not only in the assembly but installing it 50 feet above the ground in the windy weather. On the mast above the Tri-Bander we also installed an eleven element 2-meter Yagi. A heavy duty Tail-Twister rotator drives the beam.

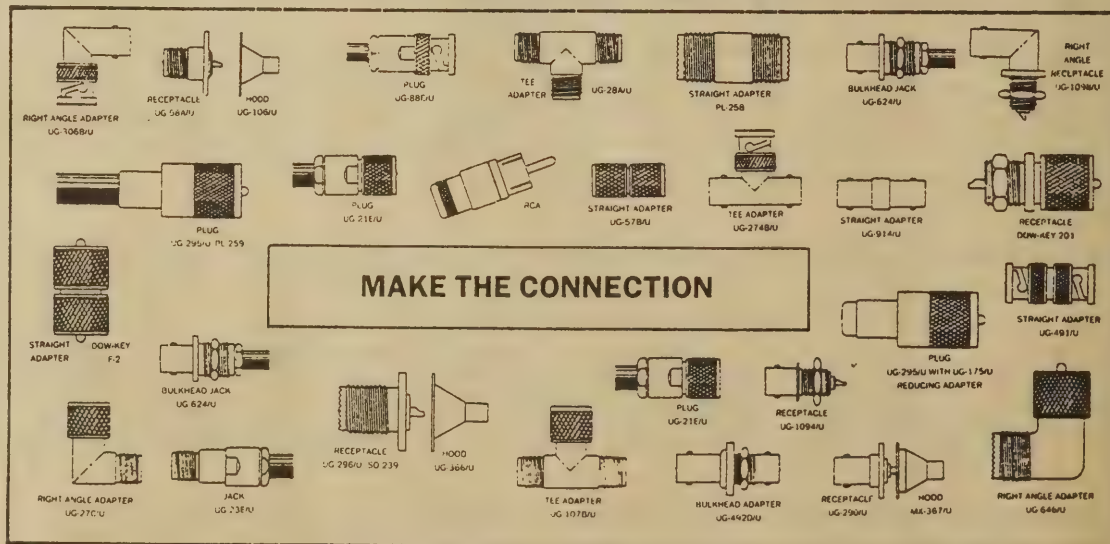
The scheduled meeting of PGWA will be on Tuesday, October 6. Frank - WA3ZMW will discuss and demonstrate a Morse telegraph land-line system. Handouts will be provided.

The Disaster Services Committee was scheduled to participate in the Simulated Emergency Test on October 17 and then hold a critique session immediately after. We will have the report in next month's column.

Ken Easton - N3HLY

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Northern Virginia FM Association, Inc.

Meetings: 3 times per year (fall, spring, winter)
Weekly Nets: NVFMA Net: Every Wed., 8:00 PM local, 146.79
ARES/Public Service Net, Every Sun., 9:00 p.m. local, 146.91
On Air Equipment Clinic, First Wed. 7:30 p.m. local, 146.79
Repeaters: 2-Meter: 146.79- (W4LBL-FFX City) & 146.91- (W4XG-Tysons Corner)
440 Mhz: 444.75+ (K4JYF-Tysons Corner)
220 Mhz: 224.50- (WB4YHD-FFX City & X-linked to 146.79)
224.34- (KB4CVL-Tysons Corner)
1292.1 MHz out / 1272.1 MHz in (K6LEW-Tysons Corner)
Membership Info: Norm Rosenthal - KB4VLP, (703) 425-7108 or
Margaret Lindsley - KB4IKU, (703) 818-8182
Mailing Address: NVFMA, P.O. BOX 486, McLean VA 22101

146.91 Antenna Party

On Saturday, September 26 an antenna party installed a new antenna mount for the 146.910- (W4XG Tysons Corner) repeater. Much thanks goes to the crew: KM4FJ; KM4OI; W4XG; KB4CVL; K9SP; KB2CEV; KB4NRU; KK4GB; KC4OCG.

Hurricane Iniki!

Another N4UVQ Adventure!

While most envision a vacation to Hawaii as sun, sand, surf and tropical greenery, Larry picked a week to visit Hawaii which provided much more! On September 11, Hurricane Iniki brushed the Waianae coast of Oahu with 110 mph winds before moving on to devastate Kauai. In short order the hurricane knocked out most commercial communication, including the microwave telephone system. One of the only communication resources left operational was the 2-meter Amateur Radio repeater system through which the Emergency Operations Center (EOC) on Oahu could talk directly to its counterpart on Kauai.

A waiver of Part 97 to carry commercial traffic was granted by the FCC Engineer in Charge. For many days the repeater was used for all types of emergency communication including direct usage by the EOC's, news and weather bulletins, damage control and coordinating relief and utility recovery efforts. Larry had his handheld with him and monitored the traffic. He indicated that the Amateur's response was critical to the recovery effort. He wished he had also brought his dry cell battery pack as commercial power was off for many days and he only had one working ni-cad battery (which went the distance!).

The importance of Amateur Radio acting as an emergency backup communications resource cannot be over emphasized. QST is expected to run a series of articles covering the Amateur Radio response to Hurricanes Andrew and Iniki in the next few months. We should all take the time to read the articles and make sure that we are as prepared as possible when (not if) a similar disaster hits our area. And to Larry, we hope your next vacation is not quite as eventful. Stick to golf and flying!

Congratulations to Nancy Draheim - NK4U for the fine publicity (complete with picture) in the October issue of QST. Nancy was recognized for her dedicated and long-term service with the 4th area QSL Bureau.

Dan - KC4OCG



QCWA Journal Fall 1992

RICHMOND FROSTFEST XVI

Winter Amateur Radio and Computer Show

SUNDAY, JANUARY 17, 1993

The Showplace, 3000 Mechanicsville Turnpike, Richmond, Virginia



Hours: 8:30 A.M.-3:30 P.M.

An ARRL Approved Event



Presented By The Richmond Amateur Telecommunications Society

GENERAL INFORMATION

SAME LOCATION AS LAST YEAR! Improved ticket lines. Building available for set-up from 12:00 p.m. until 8:00 p.m. on Saturday, and 6 a.m. till 8 a.m. on show day. Drive-in for unloading is available on Saturday only.

COMMERCIAL AND FLEA MARKET TABLE AREAS! Commercial booth space prices include power. Flea market exhibitors needing power are required to pay a \$5.00 electrical fee (gives access to one 120V outlet).

DEADLINE FOR ALL RESERVED SPACES AND ADVANCE TICKET SALES IS DECEMBER 30, 1992. No space reservations or advance tickets after that date. Any unsold spaces will be available on the day of the show. All monies for advance tickets and reserved spaces must be received no later than January 7, 1993.

FIRST-RATE TALK-IN SERVICE! Talk-in provided Sunday morning on the 146.88 and 145.43 repeaters.

TICKETS AND RESERVATIONS: Mark Huff, WA4DHY, (804)747-0227
OTHER INFORMATION: Bill Mason, AB3P, Frostfest Director, (804)745-5822 Evenings

REGISTRATION FORM

NAME _____ TELEPHONE _____

BUSINESS NAME or AMATEUR CALL SIGN _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

_____ COMMERCIAL BOOTH SPACES (8' each) @ \$40.00 FIRST TABLE,
\$35.00 EACH ADDITIONAL TABLE (Price includes admission, tables, and electrical power) \$ _____

_____ GENERAL TABLES (8') @ \$15.00 EACH \$ _____
(Non-Commercial Exhibitors must also purchase General Admission Tickets)

_____ ELECTRICAL POWER FOR FLEA MARKET AREA @ \$5.00 \$ _____
(Payment of one power fee covers all flea market tables for an exhibitor and includes access to one 120V outlet)

_____ ADMISSION TICKETS @ \$5.00 EACH \$ _____

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CUT-OFF FOR ADVANCE TICKETS AND RESERVATIONS IS DECEMBER 30, 1992

Those Keplerian Elements

Several satellite tracking enthusiasts have asked for some insight on the set of numbers they punch into their PC's to get antenna pointing information.

These primary Keplerian elements, as they are called, are derived from classical astronomical motions. They are coefficients that, when inserted into a special set of equations, solve for the position of a low earth-orbiting satellite with respect to a terrestrial observer at a given time. In a sense, satellite motion is rather simple. An ellipse! The fact that we are trying to track this simple motion from a point inside the path, on a spinning ball, makes for the more interesting challenge!

First, the Keplerian element set is tied to a specific reference time. This is called the EPOCH. The epoch value contains the date and time in decimal notation. A value of 92318.500000 represents November 13, 1992 at 1200 UTC. (November 13 is the 318th day of 1992.) Now that a snapshot in time is established for the satellite we must get the orbit characteristics one at a time: plane, shape, orientation, size, and position. The most basic description of any orbit is its INCLINATION. This specifies the tilt of the plane of the satellite orbit with respect to the plane of the earth's equator. At a glance this information can tell a northern USA ham watching for SAREX whether he may have a line-of-sight viewing opportunity.

To describe the orbital plane position, the RIGHT ASCENSION OF THE ASCENDING NODE (RAAN) is given. The RAAN references "where" the inclined orbit is at the epoch. Convention places this as the longitude directly under the satellite path crossing the equator northward. ECCENTRICITY the shape of the satellite path. For a nearly circular orbit this figure is nearly zero. As shown in high school geometry class, as an ellipse is "flattened" (approaches a straight line) its eccentricity approaches unity. The orientation of this orbit path must be further refined. The ARGUMENT OF PERIGEE provides the orientation by revealing the point over the earth of the satellite's closest approach. It is an angle with the RAAN as reference. Next, the "size" of the orbit path must be obtained. The MEAN

MOTION does this for us. This figure is given as the number of orbits per UTC day. The reciprocal of mean motion is the orbital period. The apparent westward progression of the ground track of many satellites can be approximated by dividing 360 degrees by the mean motion. Some programs prefer to use the SEMIMAJOR AXIS over mean motion. These constants are directly related, therefore only one of the two is required. Finally, the location on the orbital path is needed. The MEAN ANOMALY provides an angular position of the satellite with reference to the perigee at the epoch time. The term is also used to label scheduled portions of orbits. The MA or "phase" can be noted in either angular portions of a "circle" or (dimensionless) portions of 256 equal time intervals of an orbit. These are the minimum number of terms required to pinpoint a given amateur satellite. Other terms are included to determine some secondary concerns. For example, the CATALOG NUMBER and international designator are labels used by governments for keeping track of orbital "fragments". The ELEMENT SET denotes the relative age of the Keplerian data. The EPOCH REVOLUTION is the age of the lofted satellite in orbits. The DECAY RATE or drag factor allows better prediction precision in orbital computations. And CHECKSUM is a means to detect a set with an error.

Other helpful information such as doppler shift can be derived here as well. However, to determine something like spacecraft attitude, a more sophisticated tracking model and additional input data are required. So, a low earth satellite can be tracked with Keplerian elements that include the time (epoch), the orbital plane description (inclination and RAAN), the shape of the orbital path within the plane (eccentricity), the orientation of the path (argument of perigee), the size of the orbit (mean motion), and the position on the orbital path (mean anomaly). The antenna pointing angles are then produced by your tracking program for the times it calculates the satellite to appear above your horizon using these numbers.

Happy tracking!

Pat Kilroy - WD8LAQ, Local AMSAT-NA

Coming Events Extended Schedule

Aug 13-15	ARRL National Convention, Huntsville, Alabama
Aug 15*	Southern Patuxent Hamfest, Upper Marlboro, MD
Aug 28-29*	Roanoke Valley Hamfest, Roanoke, VA
Aug 29*	Hershey Park Hamfest, Hershey, PA
Sep 4-5*	Shelby Hamfest, Shelby, NC
Sep 6	Labor Day
Sep 12	F.A.R. Fest TM 93, Gaithersburg, MD
Sep 16	First Day of Rosh Hashanah
Sep 18-19*	York Hamfest, York, PA
Sep 18-19*	Virginia Beach Hamfest, Virginia Beach, VA
Sep 25	Yom Kippur
Oct ?	QCWA National Convention, St. Petersburg, FL
Oct 10*	CARA Hamfest, Howard County Fairgrounds
Oct 17*	Cumberland County Hamfest, Carlisle, PA
Nov 7*	Mason Dixon Hamfest, Westminster, MD
Nov 25	Thanksgiving Day
Dec 9	First Day of Hanukkah
Dec 11*	Holiday Fest '93, Largo, MD
Dec 25	Christmas Day

1995

Apr 28-30 Dayton Hamvention

Thanks to Bob Milligan - KI4MB and the SERA Repeater Journal for providing much of the above information. Please keep Auto-Call advised of coming Hamfests and other important Coming Events. We are anxious to provide our readers with timely information and help to avoid possible conflicts when scheduling activities.

** Dates not yet confirmed*

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We are anxious to provide our readers with timely information and help to avoid possible conflicts when scheduling activities.

We can use all the help we can get!

ANNOUNCING!

THE 1993

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Full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone and all ads must be pre-paid. Since no effort is made to investigate advertisers, no warranty can be implied.

Copy must be received by the 5th of the month preceding publication.

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Hustler 5BTV Vertical \$50
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By

Joe Kasser, W3/G3ZCZ

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WANTED: High power mobile Transceiver

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WANTED: 1960s Allied and Heathkit catalogs. Ed Goss-N3CW, 13107 Golden Oak Drive, Laurel, MD 20708 (11)

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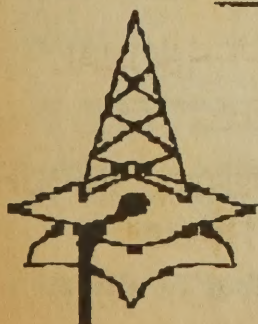
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FOR SALE: A3S Cushcraft Beam. \$189 New/traps. With new coax switch. Please call day or night (301) 681-3437. Ask for Ariel 10,000 Greenock Road, Silver Spring, MD 20901 (Nov)

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Copy for Auto-Call will be accepted in any form - handwritten, typed, compatible computer disk or modem. All hard copy is reformatted to preserve uniformity of style in the magazine. We use Word Perfect 5.1 word processing program, Hayes compatible modem (300 or 1200 baud) and can use either 3½" or 5¼" MS-DOS diskettes. We don't do Windows.

In determining space requirements, figure about 600 words per page (50 lines at 12 words per line), including the space taken up by headings, photographs, etc. Either black-and-white or color photos can be used as long as the contrast is good. Master copy, which is to be reproduced directly, should be in black ink on white paper and should be in proper page ratio. (Copy space is 7" wide by 9" high.) Copy can be reduced or enlarged as necessary.

Columns from Foundation member clubs are eagerly solicited and any items of general Amateur Radio interest are most welcome. The editor does reserve the right to edit or reject any portion of any copy submitted and to make minor changes to make copy fit available space.

SHACK SALES

Deadline for copy is the 5th of the month preceding the publication date. Shack Sales will **NOT** be accepted over the telephone. Full address must be provided for our reference but need not be published. Each ad must include the call sign or the full name of the advertiser. If the full address is not included, we prefer to include the city along with a telephone number so that readers will know whether a long-distance charge is involved. The entire telephone number - including city and state - is counted as only one word. We do not count postal zip codes. Otherwise, each word, abbreviation, model number or group of letter/numbers is counted as one word. Remittance must accompany each ad.

See next column for additional information on advertising. For further information, phone the Auto-Call editor at (703) 536-8469, McLean, VA.

ADVERTISING

SHACK SALES

Non-commercial advertising of Amateur associated equipment is available to subscribers of Auto-Call at 3¢ per word - with a \$1.00 minimum. Commercial vendors and non-subscriber rate is 17¢ per word - with a \$5.50 minimum.

Special headings or special spacing may be used (e.g., one item per line) but such ads are charged at a column inch rate - \$1.00 per column inch for non-commercial ads, \$5.50 per inch for commercial vendors and nonsubscribers.

Full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone. Since no effort is made to investigate advertisers, no warranty can be implied.

DISPLAY ADS

DISPLAY ADS are "boxed" and may contain artwork or photographs. They may be placed along with the Shack Sales or displayed in other sections of the magazine. Requests for specific locations will be honored if practical but cannot be guaranteed.

Display ads are charged according to size and duration of run as shown below. All advertising must be pre-paid for at least the current month.

		Rates per Issue			
Page	Col.inch	1 Year	6 Times	3 Times	1 Time
Full	18	\$75.00	\$90.00	\$100.00	\$105.00
1/2	9	55.00	65.00	71.00	75.00
1/3	6	40.00	46.00	51.00	54.00
1/4	4½	33.00	38.00	41.00	43.00
1/6	3	22.00	26.00	28.00	30.00
1/8	2¼	17.00	20.00	22.00	23.00
1/9	2	16.00	19.00	21.00	22.00
1/18	1	8.50	10.00	11.00	11.50

Based on camera-ready copy.

Extra charges for halftoning photos and for in-house artwork or layout.

Copy must be received by the 5th of the month preceding publication date. (e.g., Copy for November issue must be received by 5 October)

All Advertising Must be Pre-paid



JOIN ARRL

BENEFITS FOR YOU

QST, QSL Bureau Awards, Low Cost Insurance Operating Aids,
Government Liaison and More—Much More!

MEMBERSHIP APPLICATION

Name _____ Call _____

Street _____

City _____ Prov./State _____ PC/ZIP _____

\$30 in U.S. \$42 elsewhere (U.S. funds) Licensed amateurs or age 65 or over, upon submitting proof of age, may request special dues rate of \$24 in the U.S. \$36 elsewhere in U.S. funds. Persons age 17 and younger may qualify for special rates, write for application.

For postal purposes, fifty percent of dues is allocated to QST, the balance for membership.

VISA, MC, AMEX, Discover # _____

Signature _____ Expires _____

The American Radio Relay League

225 Main St. Newington, CT. 06111 USA AUTOCALL

Atlantic Division Director
Hugh Turnbull, W3ABC
6903 Rhode Island Avenue
College Park, MD 20740
Phone: (301) 927-1797

Roanoke Division Director
John Kanode, N4MM
Rt 1, Box 73-A
Boyce, VA 22620
Phone: 703-837-1340

AUTO-CALL Magazine

P.O. Box 7612

Falls Church, VA 22040-1452

Please enter my NEW _____ RENEWAL _____ GIFT _____ subscription to Auto-Call

For 1 Year _____ 2 Years _____

Subscription rate: \$8.00 per year.

(Sample copy of latest issue \$1.00)

will be applied to subscription

NAME _____ CALL _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Make check payable to the Foundation For Amateur Radio

NOVEMBER 1992

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 <u>EXAMS</u> Landover	2 Adams County Dept of State IBM	3 Antietam PG Wireless	4 BARC MARC	5 Anne Arundel Voice America	6 Mobileers Shennandoah	7 Stafford <u>EXAMS</u> Portsmouth
8	9 PVRC Carroll Cnty	10 Frederick ARC Fauquier Woodbridge	11 Pentagon S.Patuxent --- FAR --- Alexandria	12 AMRAD MADRAS Mt. Vernon No. Virginia	13 Alexandria So. Maryland Vienna	14 Stafford <u>EXAMS</u> Davidsonvil Alexandria Manassas Stafford
15	16 Ole VA Hams Sterling Park	17 Antietam Arlington	18 BARC Goddard MARC QCWA #137	19 Anne Arundel QCWA #20	20 Rock Creek Shennandoah <u>EXAMS</u> Temple Hills	21 Capital City D-MARC Stafford <u>EXAMS</u> Laurel Herndon
22	23	24 Columbia	25 Laurel QCWA #20	26 THANKSGIVING	27 Central MD Vienna	28 Stafford <u>EXAMS</u> Laurel
29 Adventists	30 <u>EXAMS</u> Annapolis	31				

NCDXA Net every Sunday 147.420 at 8:30 p.m.

Nonprofit Organization
U.S. Postage Paid
Arlington, VA 22210
Permit 757

AUTO-CALL

P.O. Box 7612

Falls Church, VA 22040-7612

ADDRESS CORRECTION REQUESTED

93/09 02649
ALFRED A LAUN III K3ZO
PO BOX 31097
TEMPLE HILLS MD 20757